

OPERATION AND PARTS MANUAL



HPHA36C5H WALK-BEHIND TROWEL

Revision #3 (07/06/10)

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www.multiquip.com



THIS MANUAL MUST ACCOMPANY THE EQUIPMENT AT ALL TIMES.



WARNING



CALIFORNIA — Proposition 65 Warning

Engine exhaust and some of its constituents, and some dust created by power sanding, sawing, grinding, drilling and other construction activities contains chemicals known to the State of California to cause cancer, birth defects and other reproductive harm.

Some examples of these chemicals are:

- Lead from lead-based paints.
- Crystalline silica from bricks.
- Cement and other masonry products.
- Arsenic and chromium from chemically treated lumber.

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: **ALWAYS** work in a well ventilated area, and work with approved safety equipment, such as dust masks that are specially designed to filter out microscopic particles.

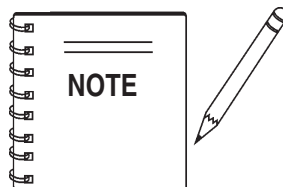
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MQ - HPHA36C5H TROWEL

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HONDA GX160K1QX2 ENGINE

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Specification and part number are subject to change without notice.

HPHA36C5HTROWEL—TRAINING CHECKLIST

TRAINING CHECKLIST

This checklist will lists some of the minimum requirements for machine maintenance and operation. Please feel free to detach it and make copies. Use this checklist whenever a new operator is to be trained or it can be used as a review for more experienced operator's.

TRAINING CHECKLIST			
NO.	DESCRIPTION	OK?	DATE
1	Read Operator's Manual completely.		
2	Machine layout, location of components, checking of engine and gearbox fluid level.		
3	Fuel system, refueling procedure.		
4	Operation of controls (machine not running).		
5	Safety controls.		
6	Emergency stop procedures.		
7	Startup of machine.		
8	Maneuvering.		
9	Pitching.		
10	Concrete finishing techniques.		
11	Shutdown of machine.		
12	Lifting of machine.		
13	Machine transport and storage.		

Operator _____ Trainee _____

COMMENTS:

HPHA36C5HTROWEL— DAILY PRE-OPERATION CHECKLIST

DAILY PRE-OPERATION CHECKLIST

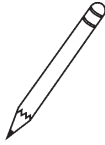
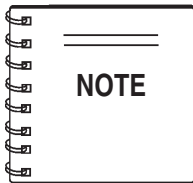
DAILY PRE-OPERATION CHECKLIST		✓	✓	✓	✓	✓	✓
1	Engine Oil Level.						
2	Gearbox Fluid Level.						
3	Condition of Blades.						
4	Blade Pitch Operation.						

COMMENTS:

HPHA36C5H TROWEL- SAFETY MESSAGE ALERT SYMBOLS

FOR YOUR SAFETY AND THE SAFETY OF OTHERS!

Safety precautions should be followed at all times when operating this equipment. Failure to read and understand and comply with the Safety Messages and Operating Instructions could result in injury to yourself and others.



This Owner's Manual has been developed to provide complete instructions for the safe and efficient operation of the MQ HPHA36C5H TROWEL. For engine maintenance information, please refer to the engine manufacturers instructions for data relative to its safe operation.

Before using this WALK-BEHIND TROWEL, ensure that the operating individual has read and understands all instructions in this manual.

SAFETY MESSAGE ALERT SYMBOLS

The three (3) Safety Messages shown below will inform you about potential hazards that could injure you or others. The Safety Messages specifically address the level of exposure to the operator, and are preceded by one of three words: **DANGER**, **WARNING**, or **CAUTION**.

DANGER

You **WILL** be **KILLED** or **SERIOUSLY INJURED** if you **DO NOT** follow these directions.

WARNING

You **CAN** be **KILLED** or **SERIOUSLY INJURED** if you **DO NOT** follow these directions.

CAUTION

You **CAN** be **INJURED** if you **DO NOT** follow these directions.

Potential hazards associated with HPHA36C5H TROWEL operation will be referenced with **Hazard Symbols** which appear throughout this manual, and will be referenced in conjunction with **Safety Message Alert Symbols**.

HAZARD SYMBOLS



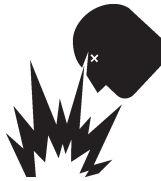
Lethal Exhaust Gases



Engine exhaust gases contain poisonous carbon monoxide. This gas is colorless and odorless, and can cause death if inhaled. **NEVER** operate this equipment in a confined area or enclosed structure that does not provide ample free flow air.



Explosive Fuel



Gasoline is extremely flammable, and its vapors can cause an explosion if ignited. **DO NOT** start the engine near spilled fuel or combustible fluids. **DO NOT** fill the fuel tank while the engine is running or hot. **DO NOT** overfill tank, since spilled fuel could ignite if it comes into contact with hot engine parts or sparks from the ignition system. Store fuel in approved containers, in well-ventilated areas and away from sparks and flames. **NEVER** use fuel as a cleaning agent.



Burn Hazards



Engine components can generate extreme heat. To prevent burns, **DO NOT** touch these areas while the engine is running or immediately after operations. **NEVER** operate the engine with heat shields or heat guards removed.



Rotating Parts



NEVER operate equipment with covers, or guards removed. Keep **fingers, hands, hair** and **clothing** away from all moving parts to prevent injury.

HPHA36C5H TROWEL- SAFETY MESSAGE ALERT SYMBOLS



Accidental Starting



ALWAYS place the engine **ON/OFF** switch in the **OFF** position, when the trowel is not in use.



Respiratory Hazard



ALWAYS wear approved respiratory protection.



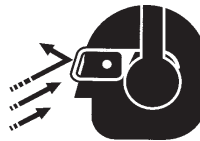
Over Speed Conditions



NEVER tamper with the factory settings of the engine governor or settings. Personal injury and damage to the engine or equipment can result if operating in speed ranges above maximum allowable.



Sight and Hearing hazard



ALWAYS wear approved eye and hearing protection.



Equipment Damage Messages

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



CAUTION

This walk-behind trowel, other property, or the surrounding environment could be damaged if you do not follow instructions.

HPHA36C5H TROWEL— RULES FOR SAFE OPERATION

RULES FOR SAFE OPERATION

WARNING

Failure to follow instructions in this manual may lead to serious injury or even death! This equipment is to be operated by trained and qualified personnel only! This equipment is for industrial use only.

The following safety guidelines should always be used when operating the HPHA36C5H Trowel.

SAFETY

- **DO NOT** operate or service this equipment before reading this entire manual. The manual must be kept available and accessible to the operator.
- This equipment should not be operated by persons under the minimum statutory age limit.
- **NEVER** use this machine for any purpose other than those described in this manual.
- **NEVER** operate the trowel without proper protective clothing, shatterproof glasses, steel-toed boots and other protective devices required for the job.

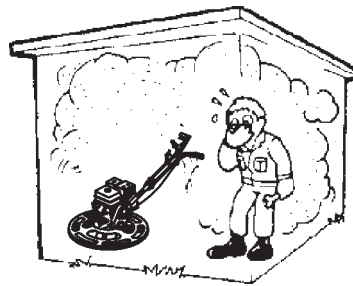


- **NEVER** use accessories or attachments which are not recommended by Multiquip for this equipment. Damage to the equipment and/or injury to user may result.
- Manufacturer does not assume responsibility for any accident due to equipment modifications. Unauthorized equipment modification will void all warranties. Any modification which could lead to a change in the original characteristics of the machine should be made only by the manufacturer who shall confirm that the machine is in conformity with appropriate safety regulations.

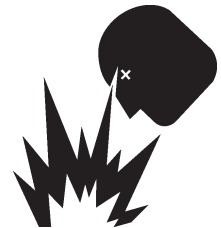
- **NEVER** operate this equipment when not feeling well due to fatigue, illness or taking medicine.
- **NEVER** operate the trowel under the influence of drugs or alcohol.
- Replace nameplate, operation and safety decals when they become difficult to read.
- **ALWAYS** check the trowel for loosened hardware such as nuts and bolts before starting.
- **NEVER** touch the hot exhaust manifold, muffler or cylinder. Allow these parts to cool before servicing the trowel.



- **High Temperatures** – Allow the engine to cool before adding fuel or performing service and maintenance functions. Contact with **hot!** components can cause serious burns.
- The engine of this trowel requires an adequate free flow of cooling air. **NEVER** operate the trowel in any enclosed or narrow area where free flow of the air is restricted. If the air flow is restricted it will cause serious damage to the engine and may cause injury to people. Remember the engine gives off **DEADLY** carbon monoxide gas.



- **ALWAYS** refuel in a well-ventilated area, away from sparks and open flames.
- **ALWAYS** use extreme caution when working with **flammable** liquids. When refueling, **STOP** the engine and allow it to cool.
- **NEVER** operate the trowel in an explosive atmosphere where fumes are present, or near combustible materials. An explosion or fire could result in severe **bodily harm or even death**.



- **NEVER** **smoke** around or near the machine. Fire or explosion could result from **fuel vapors**, or if fuel is spilled on a **hot!** engine.
- Topping-off to filler port is dangerous, as it tends to spill fuel.
- **NEVER** use fuel as a cleaning agent.



HPHA36C5H TROWEL— RULES FOR SAFE OPERATION

- **NEVER** Run engine without air filter. Severe engine damage may occur. Service air filter frequently to prevent carburetor malfunction.
- **NEVER** place your **feet** or **hands** inside the guard rings while starting or operating this equipment.
- **AVOID** wearing jewelry or loose fitting clothing that may snag on the controls or moving parts as this can cause a serious injury.
- **ALWAYS** keep clear of **rotating** or **moving parts** while operating the trowel.
- **Moving Parts** – Shut down the engine before performing service or maintenance functions. Contact with moving parts can cause serious injury.
- **ALWAYS** check to make sure that the operating area is clear before starting the engine.
- **NEVER** leave the machine **unattended** while running.
- **ALWAYS** be sure the operator is familiar with proper safety precautions and operations techniques before using trowel.
- **ALWAYS** keep the work area well organized.
- **ALWAYS** clear the work area of any debris, tools, etc. that would constitute a hazard while the trowel is in operation.

WARNING

ALWAYS check to make sure that the operating area is clear before starting the engine.

- No one other than the operator is to be in the working area when the trowel is in operation.
- Always observe all applicable compulsory regulations relevant to environmental protection, especially, fuel storage, the handling of hazardous substances, and the wearing of protective clothing and equipment. Instruct the user as necessary, or, as the user, request this information and training.
- **ALWAYS** store equipment properly when it is not being used. Equipment should be stored in a clean, dry location out of the reach of children.

Transporting

- **ALWAYS** shutdown engine before transporting.
- Tighten fuel tank cap securely and close fuel cock to prevent fuel from spilling.
- Drain fuel when transporting trowel over long distances or bad roads.

- When placing the trowel inside a truck-bed for transport, always tie-down the trowel.
- **ALWAYS** use proper lifting techniques when moving the trowel.

Maintenance Safety

- **NEVER** lubricate components or attempt service on a running trowel.
- **ALWAYS** allow the trowel a proper amount of time to cool before servicing.
- Keep the trowel in proper running condition.
- Fix damage to the trowel immediately and always replace broken parts.
- Dispose of hazardous waste properly. Examples of potentially hazardous waste are used motor oil, fuel and fuel filters.
- **DO NOT** use food or plastic containers to dispose of hazardous waste.

Emergencies

- **ALWAYS** know the location of the nearest **fire extinguisher**.



- **ALWAYS** know the location of the nearest **first aid kit**.



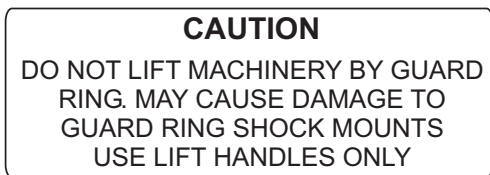
- In emergencies **always** know the location of the nearest phone or **keep a phone on the job site**. Also know the phone numbers of the nearest **ambulance**, **doctor** and **fire department**. This information is invaluable in the case of an emergency and could keep a serious situation from becoming a tragic one.



HPHA36C5H TROWEL— OPERATION AND SAFETY DECALS

OPERATION AND SAFETY DECALS

The HPHA36C5H walk-behind trowel is equipped with a number of operation, safety and maintenance decals. Should any of these decals become unreadable, replacements can be obtained from your dealer.



P/N 1261



P/N 20526



P/N 20527



P/N 20816



P/N 1736



P/N 20815



P/N 20820



P/N 1735



P/N 20814


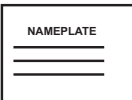



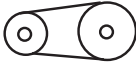

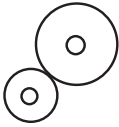
	Symbol indicates that it is mandatory to wear safety glasses, safety helmet and ear protection. P/N 11247 (Part of decal kit 12620)		CONTACT MULTIQUIP SERVICE DEPT.
	Symbol indicates that it is mandatory to wear gloves. P/N 11247 (Part of decal kit 12620)		Symbol indicates that it is mandatory to wear safety shoes, with extra protection (steel toed). P/N 11247 (Part of decal kit 12620)
	Radiating heat symbol. Symbol indicates equipment is hot. P/N 11246 (Part of decal kit 12620)		This is the symbol for belt drive. P/N 11246 (Part of decal kit 12620)
	Symbol for examining or checking of the machine. Mostly used for maintenance. Check lubrication oil in gearbox. P/N 11246 (Part of decal kit 12620)		This is the symbol for gear drive. P/N 11246 (Part of decal kit 12620)

Figure 1. HPHA36C5H Trowel Decals

HPHA36C5H TROWEL— GENERAL INFORMATION

Intended Use

Operate the HPHA36C5H Trowel, tools and components in accordance with the manufacturer's instructions. Use of any other tools for stated operation is considered contrary to designated use. The risk of such use lies entirely with the user. The manufacturer cannot be held liable for damages as a result of misuse.

Trowel Familiarization

This walk-behind trowel is designed for **floating** and **finishing** concrete slabs.

Take a walk around the trowel. Take notice of all the major components (see Figure 2) like the engine, blades, Quick Pitch™ handle, etc. Check to ensure there is always oil in the engine.

Read all the safety instructions carefully. Safety instructions will be found throughout this manual and on the trowel. Keep all safety information in good, readable condition. Operators should be well trained on the operation and maintenance of the trowel.

Before using your trowel, test it on a flat watered down section of finished concrete that is free of any debris and other objects.

This trial test run will increase your confidence in using the trowel and at the same time it will familiarize you with the trowel's controls. In addition you will understand how the trowel handles under actual conditions.

Engine

This trowel is available with a 5.5 HP **HONDA** gasoline engine. Refer to the engine owner's manual for instructions regarding the operation and maintenance of your engine. Please contact your nearest Multiquip Dealer for a replacement should the original manual disappear or otherwise become unusable.

Drive System

Power is transferred from the engine to the gearbox input shaft via a V-belt pulley drive system. The pulley engages using a centrifugal clutch.

Gearbox

The **gearbox** is located beneath the engine and transfers power to the **spider** assembly. The gearbox controls the rotational speed of the trowel and is equipped with two shafts (input and output).

Spider

The vertical output shaft of the gearbox connects to a cast hub called the **spider**. The spider has 4 arms that extend outward that are used for attachment of blades or other accessories. Remember as the gearbox output shaft rotates so does the spider assembly.

Centrifugal Stop Switch

In the event of a trowel runaway condition (operator releases the handle), a **centrifugal stop switch** will stop the engine and bring the trowel to a halt.

Blades

The blades of the trowel finish the concrete as they are rotated around the surface. This trowel comes equipped with four **combination blades** per rotor equally spaced in a radial pattern and attached to vertical rotating shaft by means of a **spider assembly**.

Moving the HPHA36C5H Walk-Behind Trowel

! CAUTION

NEVER attempt to **lift** the trowel by yourself. **ALWAYS** get the assistance of another person to help lift the trowel .

This walk-behind trowel is designed to be moved and handled in several ways. The easiest way to lift the trowel is to use the **auxiliary lifting tube** that is attached to the main handle. See page 24. When using the auxiliary tube, always use **two persons** to lift the trowel.

Some models have a **lifting bail** (option) installed. A strap or chain can be attached to the lifting bail, allowing a crane to lift the trowel up onto a slab of concrete. Use a lifting device of adequate lifting capacity to lift the trowel.



! WARNING

Lifting/Crush Hazard.

Do not lift trowel with pans attached.

PIN 21455

Training

For proper training, please use the "**TRAINING CHECKLIST**" located in the front of this manual (Page 6). This checklist will provide an outline for an experienced operator to provide training to a new operator.

HPHA36C5H TROWEL— SPECIFICATIONS (TROWEL)

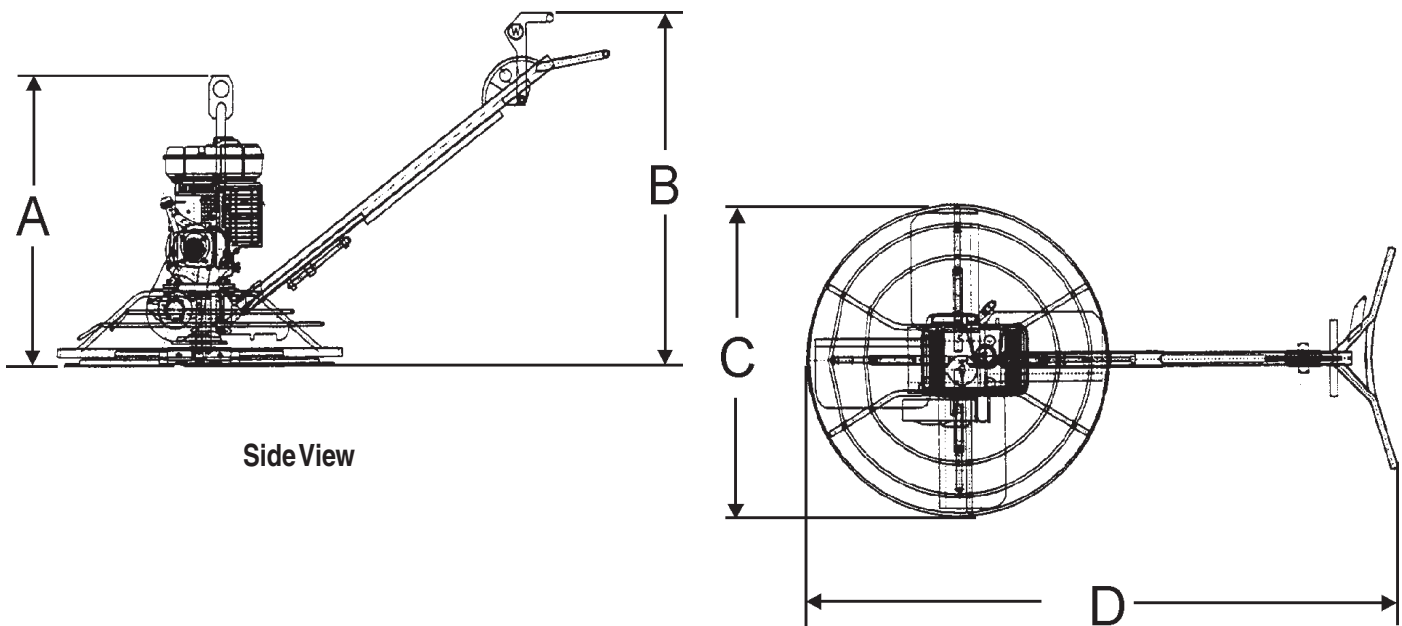


Figure 2. HPHA36C5H Trowel Dimensions

Table 1. HPHA36C5HTrowel Specifications	
A- Height (Lifting Hook)	36.7 in (931.6 mm)
B- Height Engagement Lever)	41.4 in (1,044.2 mm)
C-Width	36.5 (927.1 mm)
D-Length	70.5 (1,789.4 mm)
Weight – Operating	154 lbs./70 Kg.
Sound Pressure	94 db
Vibration	2.0g (19.6 m/s ²)
Ring Diameter	36.5 in (92.7 cm)
Number of Blades	4
Blade Tip Speed – FPM (m/s)	1,225 fpm (6.2 m/s)
Rotor – RPM (Gasoline)	130 rpm
Path Width – in. (cm)	36 in. (91.4)

NOTE:

1. Sound pressure is a weighted measure. Measured at the operators ear position while the walk-behind trowel is operating at full throttle on concrete in a manner most often experienced in “*normal*” circumstances. Sound pressure may vary depending upon the condition of the concrete. Hearing protection is always recommended.
2. The vibration level indicated is the maximum RMS (Root Mean Square) value obtained at the handle grip while operating the walk-behind trowel on curing concrete in a manner most often experienced in “*normal*” circumstances. Values were obtained from all three axes of motion. The values shown represent the maximum RMS value from these measurements.

HPHA36C5HTROWEL— SPECIFICATIONS (ENGINE)

Table 2. Specifications (Engine)

Engine	Model	HONDA GX160K1QX2
	Type	Air-cooled 4 stroke, Single Cylinder, OHV, Horizontal Shaft Gasoline Engine
	Bore X Stroke	2.7 in. X 1.8 in. (68 mm x 45 mm)
	Displacement	9.9 cu. in. (163 cc)
	Max Output	5.5 H.P./3600 R.P.M.
	Fuel Tank Capacity	Approx. .95 U.S. Gallons (3.6 Liters)
	Fuel	Unleaded Automobile Gasoline
	Lube Oil Capacity	.63 US Qt. (0.6 liter)
	Speed Control Method	Centrifugal Fly-weight Type
	Starting Method	Recoil Start
Dimension (L x W x H)	12.3 x 14.3 X 13.2 in. (312 X 362 X 335 mm)	
Dry Net Weight	33.1 lbs (15.0 Kg.)	

HPHA36C5HTROWEL— CONTROLS AND COMPONENTS

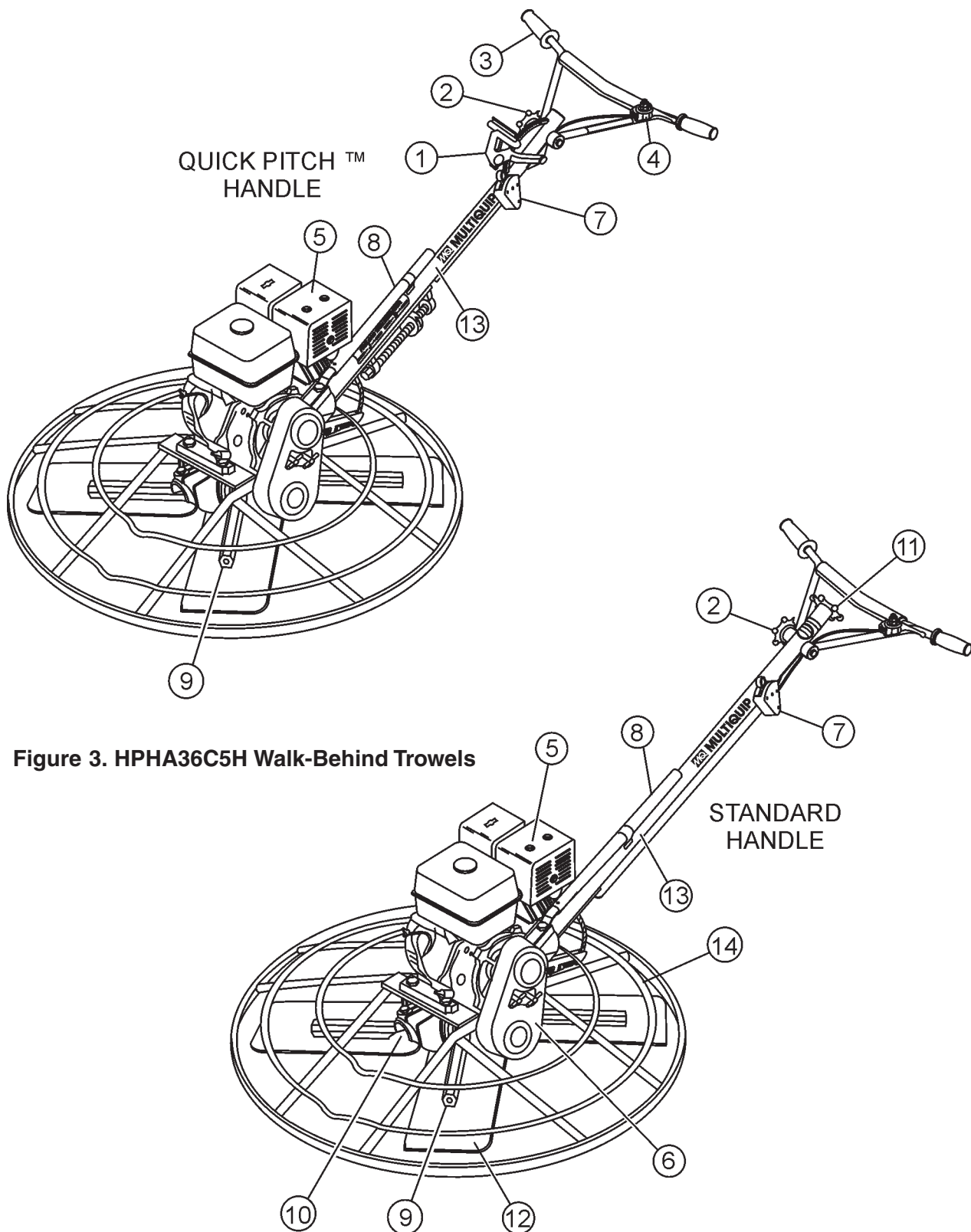


Figure 3. HPHA36C5H Walk-Behind Trowels

HPHA36C5HTROWEL— CONTROLS AND COMPONENTS

(Figures 3) shows the location of the basic controls or components, for the HPHA36C5H trowel. Listed below is a brief explanation of each control or component

1. **Quick Pitch™ Control Handle** – To adjust the pitch of the blades, grasp the handle then squeeze and move the handle forward or backward to achieve the desired blade pitch.
2. **Handlebar Adjuster** – Change the angle/height of the handle bars by loosening the star wheel, adjust handlebars to desired location, tighten the starwheel firmly to hold the handlebars in that position.
3. **Hand Grip/Handle Bar** – When operating the trowel, place both hands on each grip to maneuver the trowel. Replace hand grips when they become worn or damaged.
4. **Throttle Control Lever** – Operator control for the speed of the engine. Push the hand grip away from the operator to increase engine speed (high), pull toward the operator to decrease engine speed (low or idle).
5. **Engine** – This trowel is powered by a Honda GX160, 5.5 HP, air-cooled, 4-stroke gasoline engine
6. **V-Belt Cover** – Remove this cover to gain access to the V-belt. **NEVER** operate the trowel with this cover removed.
7. **Centrifugal Safety Stop Switch** – In the event the operator loses control of the trowel, this switch will shut-down the engine.
8. **Auxiliary Lifting Tube** - Use this tube to lift the trowel onto a slab. Tube is to be inserted into socket located in front of the gearbox.
9. **Trowel Arm** – Rigid hexagonal rod the blades are attached to. **NEVER** operate the trowel with a bent, broken or out of adjustment trowel arm. If the blades show uneven wear patterns or some blades wear out faster than others, the trowel arm may need to be adjusted. Use the trowel arm adjustment tool P/N 1817 to adjust the trowel arms.
10. **Trowel Lifting Point** – Insert the auxiliary lifting tube here. See page 24.
11. **Pitch Control (standard models)** - Turn this "Star Wheel" clockwise to increase blade pitch, and counter-clockwise to decrease blade pitch.
12. **Blades** – This trowel is equipped with combination blades. These blades are versatile and should take care of most troweling needs. In addition float discs can be attached to the trowel arms that will allow the trowel to float on "wet" concrete.

13. **Main Tube** - When disassembling components inside the tube exercise extreme **CAUTION!**

CAUTION

Tube is spring-loaded, severe injury could result if not disassembled correctly.

14. **Guard Ring** – **NEVER** put hands or feet inside guard ring.

HPHA36C5H TROWEL— BASIC ENGINE

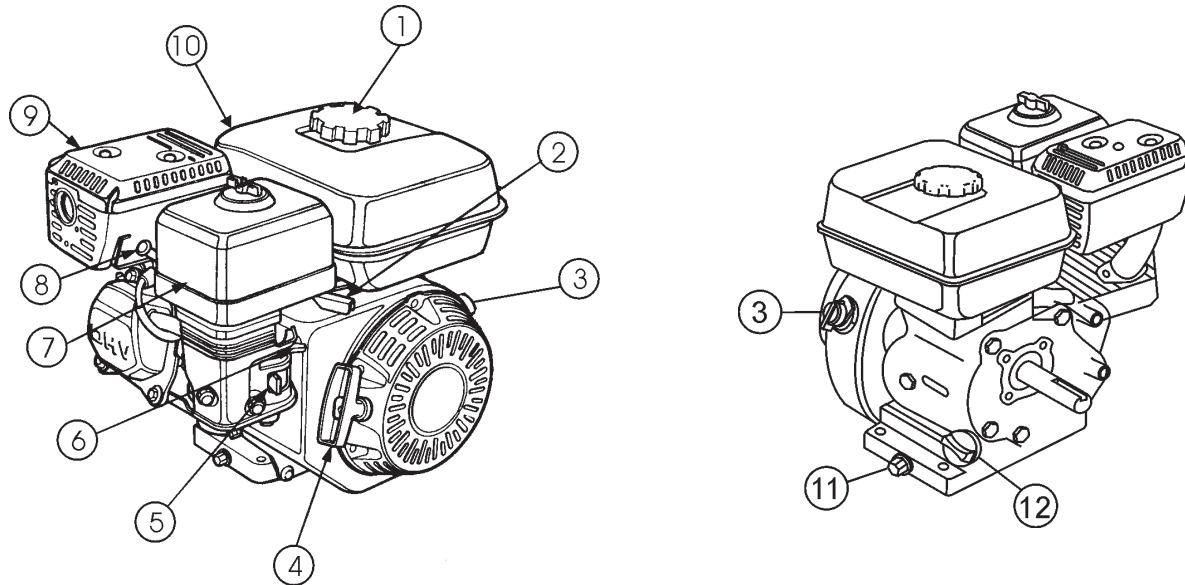



Figure 4. Engine Controls and Components

INITIAL SERVICING

The engine (Figure 4) must be checked for proper lubrication and filled with fuel prior to operation. Refer to the manufacturer's engine manual for instructions & details of operation and servicing. The engine shown above is a **HONDA** engine.

1. **Fuel Filler Cap** – Remove this cap to add unleaded gasoline to the fuel tank. Make sure cap is tightened securely. **DO NOT** over fill.

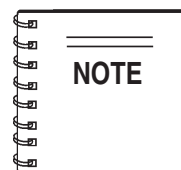
! **DANGER**



Adding fuel to the tank should be done only when the engine is stopped and has had an opportunity to cool down. In the event of a fuel spill, **DO NOT** attempt to start the engine until the fuel residue has been completely wiped up, and the area surrounding the engine is dry.

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

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



Operating the engine without an air filter, with a damaged air filter, or a filter in need of replacement will allow dirt to enter the engine, causing rapid engine wear.

8. **Spark Plug** – Provides spark to the ignition system. Set spark plug gap according to engine manufacturer's instructions.
9. **Muffler** – Used to reduce noise and emissions.
10. **Fuel Tank** – Holds unleaded gasoline. For additional information refer to engine owner's manual.
11. **Oil Drain Plug** – Remove this plug to remove oil from the engine's crankcase.
12. **Dipstick/Oil Filler Cap** – Remove this cap to determine if the engine oil is low. Add oil through this filler port as recommended in Table 3.

HPHA36C5H TROWEL — ASSEMBLY AND INSTALLATION

Assembly and Installation

Before the trowel can be put into operation, there are some components that must be installed. This section provides general instructions on how to install those components. Instruction sheet P/N 20485 provides further details for the handle assembly.

Handle Tube Installation (All Models)

1. Install the **handle tube** to the gearbox as shown in (Figure 5). The mounting hardware should be contained in the shipping container with the handle.

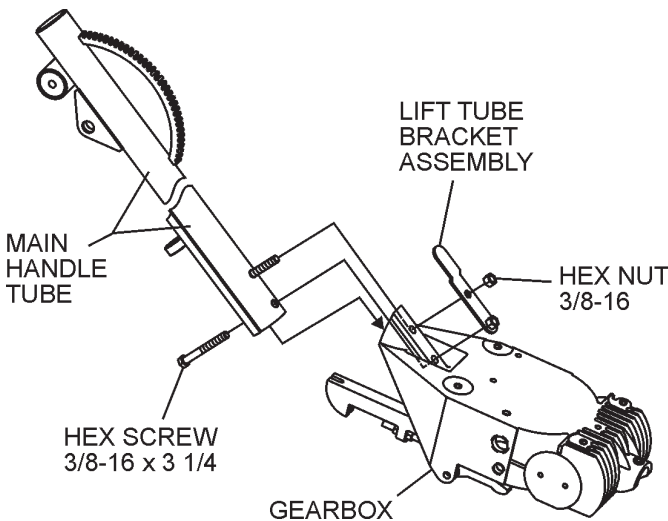


Figure 5. Handle Tube Installation

2. On Quick-Pitch™ models, pivot the **pitch handle** back (full pitch) (Figure 6). This will relax the spring inside the handle tube. On either model, spread the handle bar ends just enough to engage the teeth on the handle tube. Attach the hand wheel assembly, position handlebar to desired location, and tighten hand wheel firmly.

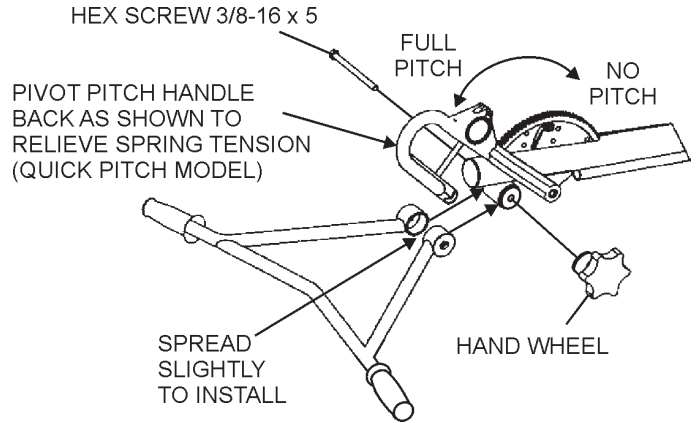


Figure 6. Handlebar Installation

Throttle Cable Installation

1. Place the throttle lever (Figure 7) to the idle position.

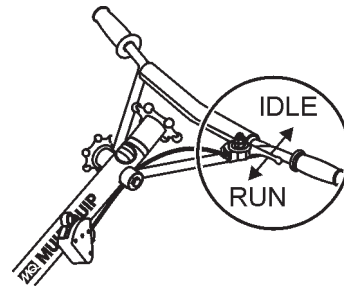


Figure 7. Throttle

2. Feed the throttle cable through the cable housing.
3. Connect the throttle cable to the engine. (Figure 8). There should be a piece of wire installed on the trowel to show where to route the throttle cable. When connecting the cable housing, make sure that no more than **1/4" (6.4mm)** of the cable housing protrudes past the housing clamp on the engine.

CAUTION
The Quick-Pitch™ handle is spring loaded, personal injury or damage could result from improper handling or installation. Be careful when installing this component.

NOTE
Considerable force may be required when moving the Quick-Pitch™ **pitch handle** forward or backward.

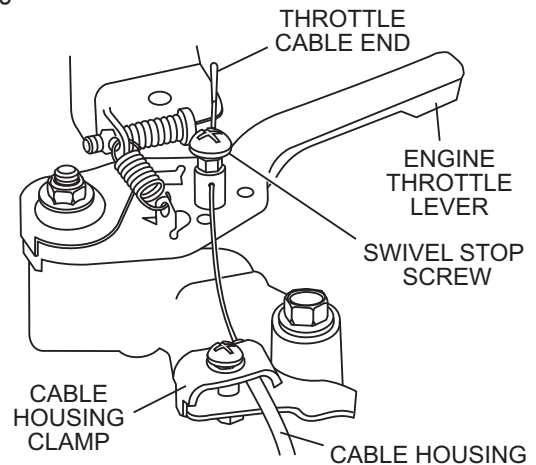


Figure 8. Throttle Cable Connection

HPHA36C5H TROWEL — ASSEMBLY AND INSTALLATION

4. Tighten cable clamp screw and swivel stop screw.
5. After the cable has been installed on the engine, adjust and tighten operator position of the handle to lock the throttle cable at the proper length.
6. Adjust cable tension loosening the lock nut on the throttle cable receiver (Figure 9), loosening or tightening the adjuster nut below it, then retightening the lock nut.

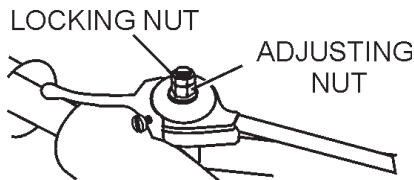


Figure 9. Throttle Adjust

7. These are general instructions. Installation of the throttle cable may vary for different engine configurations. Please look for more detailed instructions inside the box containing the handle. These more detailed instructions should provide adequate guidance for installation.

Safety Stop Switch Wire

Locate the **safety stop switch wire** protruding from the handle tube (Figure 10) and connect it to the **tail wire** on the engine. Test the safety stop switch to insure proper operation.

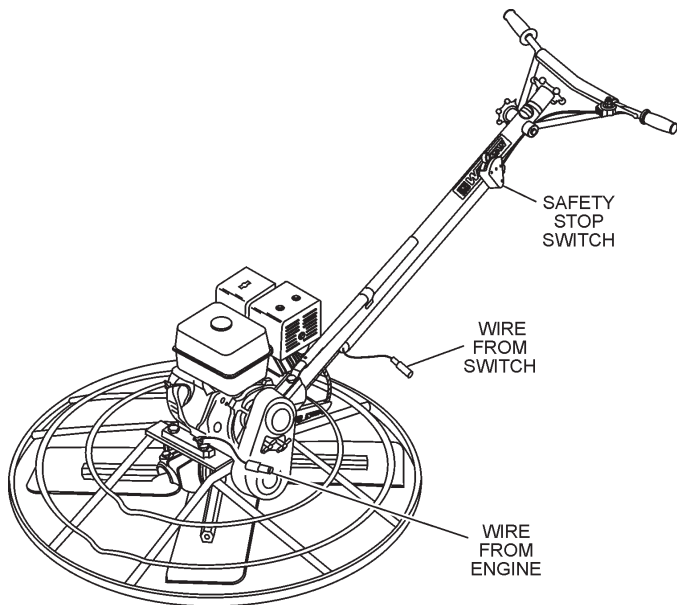


Figure 10. Engine Safety Stop Wire Connection

Pitch Cable Installation

1. Expose the pitch cable to maximum by adjusting the handle pitch to the "no pitch" position. On the standard model turn the pitch control counter-clockwise, (Figure 11). On the Quick-Pitch™ model, pivot the pitch handle forward or no pitch, (Figure 12).

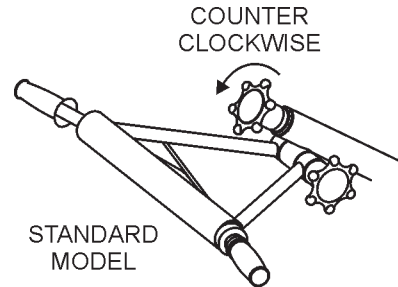


Figure 11. "No Pitch" Position (Standard)

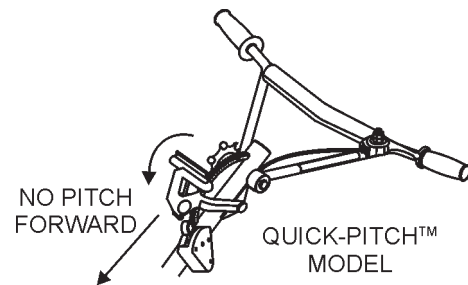


Figure 12. "No Pitch" Position (Quick-Pitch™)

2. Lock the spring in the compressed position, by releasing the blade pitch adjustment trigger, (Quick-Pitch™ model).
3. Remove one brass set nut from the blade pitch cable end as shown in (Figure 13).
4. Thread the second brass set nut towards the cable as far as possible.

HPHA36C5H TROWEL — ASSEMBLY AND INSTALLATION

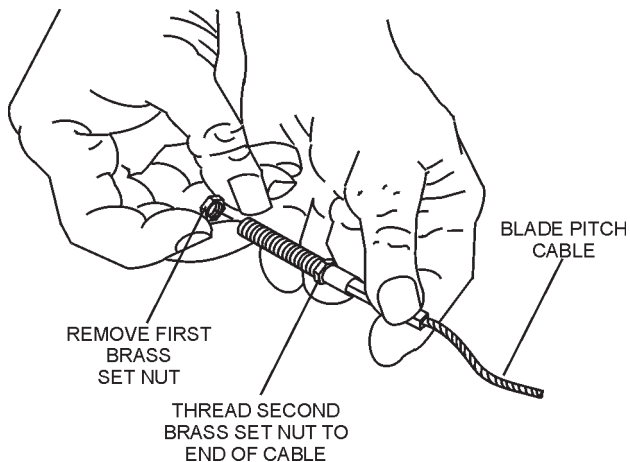


Figure 13. Blade Pitch Cable

5. Insert the cable end through the yoke eyelet (Figure 14) Tighten the first brass set nut by hand to remove all the slack from the cable.
6. Using a wrench, tighten the second brass set nut up against the yoke boss. This will lock the cable in place.
7. Use a wrench and finish tightening the first brass set nut up against the yoke boss.

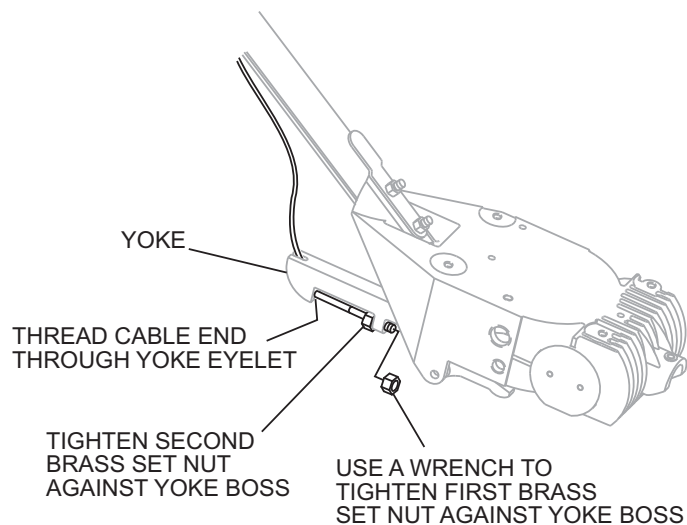


Figure 14. Cable Yoke Attachment

Pre-load Adjustment (Quick-Pitch™ Models Only)

1. After the Quick-Pitch™ handle has been installed on the trowel, spring pre-load adjustment will be required.
2. Locate the adjustment screw on the underside of the handle tube (Figure 15).

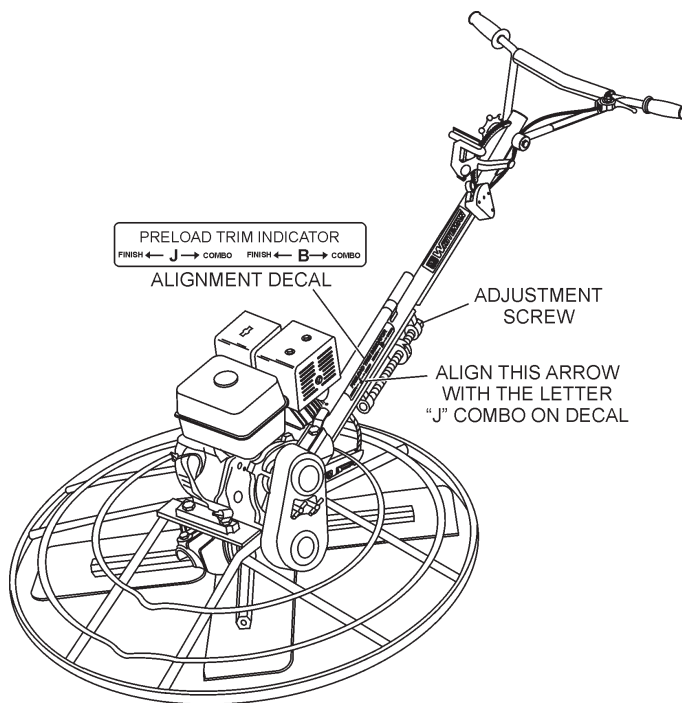


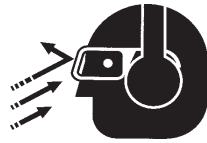
Figure 15. Pre-load Adjustment

3. A **decal** has been placed on the side of the handle tube to assist the user in the adjustment of the spring.
4. Align the **arrow** on the adjustment screw with the letter "**J**" **COMBO** on the **decal**.
5. Test the pitch control operation and adjust if necessary.

HPHA36C5H TROWEL— PRE-INSPECTION

CAUTION

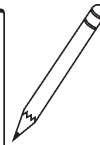
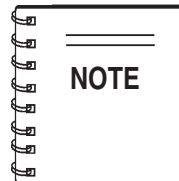
ALWAYS wear approved eye and hearing protection before operating the trowel.



NEVER place hands or feet inside the guard rings while the engine is running. **ALWAYS** shut the engine down before performing any kind of maintenance service on the trowel.



3. Insert and remove the dipstick without screwing it into the filler neck. Check the oil level shown on the dipstick.
4. If the oil level is low (Figure 17), fill to the edge of the oil filler hole with the recommended oil type (Table 3). Maximum oil capacity is 1.16 US Qt. (1.1 liters).



Reference manufacturer engine manual for specific servicing instructions.

Before Starting

1. Read safety instructions at the beginning of manual.
2. Clean the trowel, removing dirt and dust, particularly the engine cooling air inlet, carburetor and air cleaner.
3. Check the air filter for dirt and dust. If air filter is dirty, replace air filter with a new one as required.
4. Check carburetor for external dirt and dust. Clean with dry compressed air.
5. Check fastening nuts and bolts for tightness.

Engine Oil Check

1. To check the engine oil level, place the trowel on secure level ground with the engine stopped.
2. Remove the filler dipstick from the engine oil filler hole (Figure 16) and wipe clean.

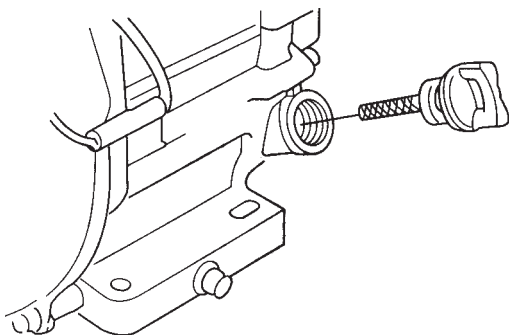


Figure 16. Engine Oil Dipstick (Removal)

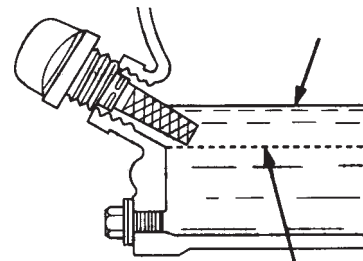


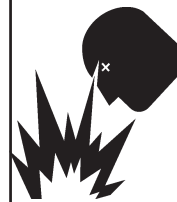
Figure 17. Engine Oil Dipstick (Oil Level)

Table 4. Oil Type

Season	Temperature	Oil Type
Summer	25°C or Higher	SAE 10W-30
Spring/Fall	25°C~10°C	SAE 10W-30/20
Winter	0°C or Lower	SAE 10W-10

Fuel Check

DANGER



Motor fuels are highly flammable and can be dangerous if mishandled. **DO NOT** smoke while refueling. **DO NOT** attempt to refuel the trowel if the engine is **hot** or **running**.

1. Remove the gasoline cap located on top of fuel tank.

HPHA36C5H TROWEL— PRE-INSPECTION

2. Visually inspect to see if fuel level is low. If fuel is low, replenish with unleaded fuel.
3. When refueling, be sure to use a strainer for filtration. **DO NOT** top-off fuel. Wipe up any spilled fuel.

Gearbox Oil

1. Determine if the **gearbox** oil is low by checking the oil sight/fill plug. Oil level should be showing. See Figure 18.

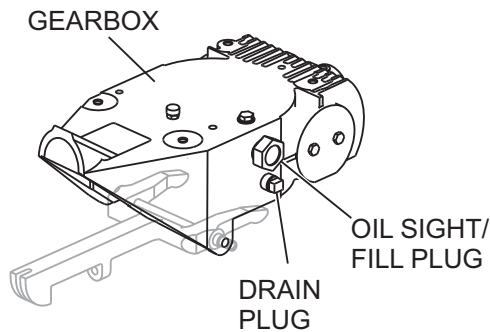


Figure 18. Gearbox

2. Fill with type ISO 680 (P/N 10139) gearbox lubricant as required. Gearbox capacity is 26 oz.

V-belt Check

A worn or damaged V-belt can adversely affect the performance of the trowel. If a V-belt is defective or worn simply replace the V-belt as outlined in the maintenance section of this manual.

Blade Check

Check for worn or damaged blades. Check to see if one blade is worn out while the others look new. If this is the case there could be a blade pitch problem. Refer to the maintenance section of this manual for blade pitch adjustment procedure. Replace any worn blades.

CONTROLS

Safety Stop Switch

This trowel has been equipped with a centrifugal safety stop switch. (Figure 19)

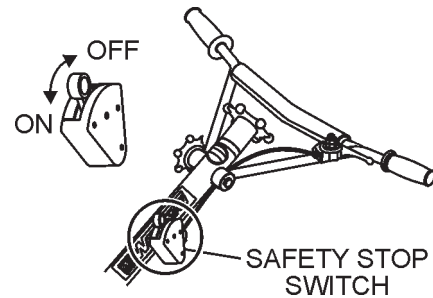
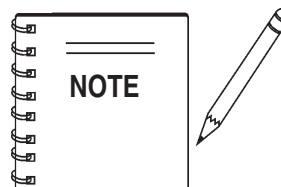


Figure 19. Centrifugal Safety Stop Switch

The switching mechanism of this switch should operate freely and should **always** be kept in this condition. With the switch in the **OFF** position, the engine should not start or run. The purpose of this switch is to stop the engine in a runaway situation, (i.e. the operator releasing the handle during operation). Safety stop switches should be tested every time the engine is started. See page 25 for procedures to check the operation of the Safety Stop Switch.



NEVER! disable or disconnect the safety stop switch. It is provided for operator safety. Injury may result if it is disabled, disconnected or improperly maintained.

HPHA36C5H TROWEL — INITIAL START-UP

CAUTION

The trowel is **heavy** and **awkward** to move around. Use proper heavy lifting procedures and **DO NOT lift the trowel by the guard rings**.

LIFTING THE TROWEL ONTO THE SLAB.

Auxiliary Lifting Tube

Remove the auxiliary lifting tube located on top of the main handle. Insert the tube into the socket located on the opposite side of the gearbox (Figure 20) from the handle.

Make sure that the hole in the tube engages with the pin in the socket. With one person lifting from the main handle, and another lifting from the auxiliary lifting tube pick up the machine to move onto a slab.

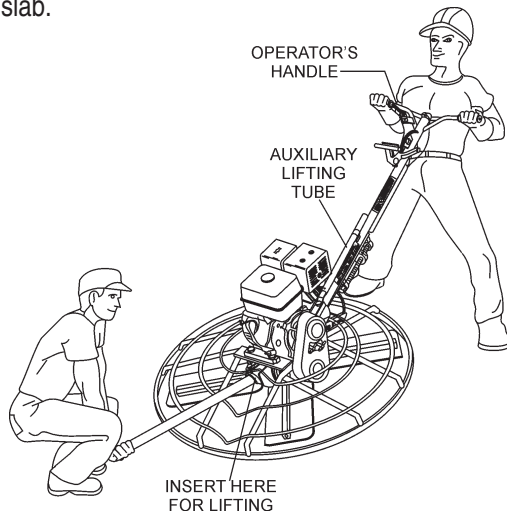


Figure 20. Lifting the Trowel

CAUTION

The trowel must be stabilized by the person carrying the **operator's handle** (Figure 20). If it is not stabilized properly the handle may swing around and **flip** the trowel, thus causing damage to the trowel and bodily injury.

Lifting Bail (Option)

The lift bail is optional on new trowels. It provides an optimal lift point for moving the trowel. **Lift bails** can be used to lift a trowel up onto a building with a crane. See "**Optional Equipment**" section in this manual for ordering information.

Using a **crane** to move a machine with a lift bail is highly recommended, and is safe for the machine. Extra care should be taken when lifting the machine off the ground, though. Serious damage to the machine or personal injury could be caused by dropping a trowel.

This section is intended to assist the operator with the initial start-up of the walk-behind trowel. It is extremely important that this section be read carefully before attempting to use the trowel in the field.

DO NOT use your trowel until this section is thoroughly understood.

CAUTION

DO NOT attempt to operate the trowel until the Safety, General Information and Inspection sections of this manual have been read and thoroughly understood. Depending on engine manufacturer, operating steps may vary. See engine manufacturer's operating manual. The following start-up procedure makes reference to a **HONDA 5.5 HP Engine (Manual Start)**.

Starting the Engine

1. Place the engine **fuel valve lever** (Figure 21) to the "ON" position.

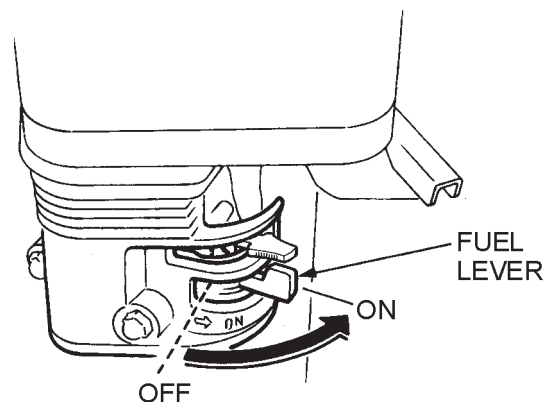


Figure 21. Engine Fuel Valve Lever

2. Move the throttle lever (Figure 22) to the "idle" position.

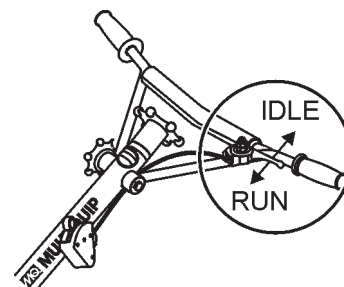


Figure 22. Throttle (Idle Position)

HPHA36C5H TROWEL — INITIAL START-UP

- Place the **centrifugal safety stop switch** (Figure 23) in the "ON" position.

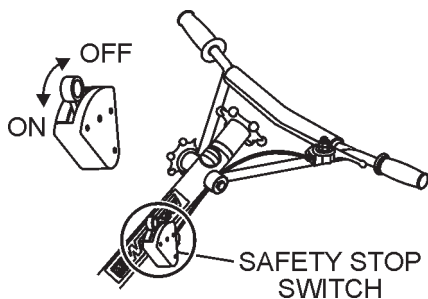


Figure 23. Centrifugal Safety Stop Switch

- Place the **Choke Lever** (Figure 24) in the "CLOSED" position

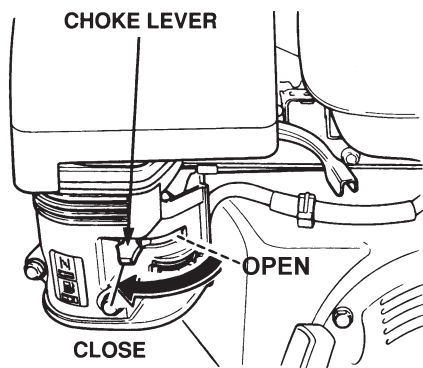


Figure 24. Engine Choke Lever

- Grasp the starter grip (Figure 25) and slowly pull it out. The resistance becomes the hardest at a certain position, corresponding to the compression point. Pull the starter grip briskly and smoothly for starting.

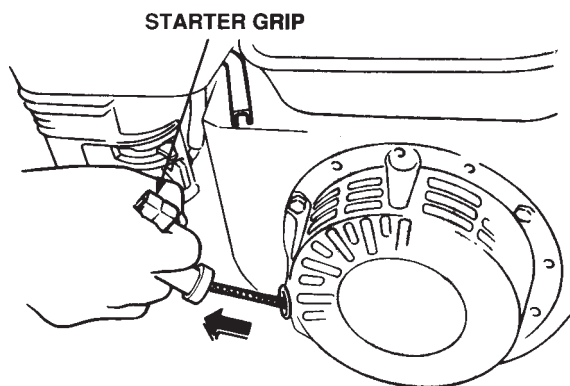


Figure 25. Starter Grip

- If the engine has started, slowly return the choke lever (Figure 24) to the **OPEN** position. If the engine has not started repeat steps 1 through 5.
- Before the trowel is placed into operation, run the engine for several minutes. Check for fuel leaks, and noises that would associate with a loose guard ring and/or covers.
- Test the Safety Stop Switch.

- With the engine at idle, move the safety stop switch lever to "OFF" (Figure 23). The engine should shut off.
- CLEAR THE AREA AROUND THE TROWEL.** Move the safety stop switch lever back to the "ON" position, restart the engine and let idle. Stand behind the handle and spin the handle to the right, simulating a runaway situation. (See Figure 26). Centrifugal force should throw the safety switch outward to the "OFF" position thus shutting off the engine.

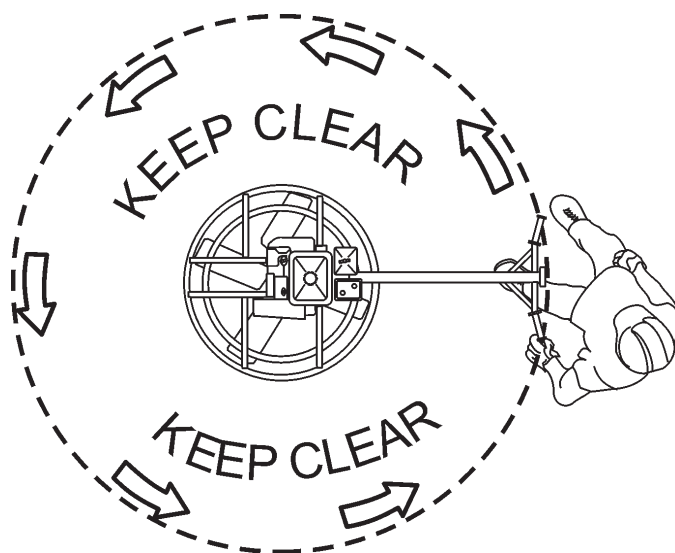


Figure 26. Testing the Centrifugal Safety Stop Switch

- To begin troweling, push the throttle lever (Figure 27) toward the "RUN" position.

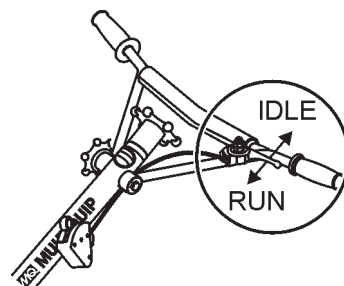


Figure 27. Throttle (Run Position)

HPHA36C5H TROWEL — OPERATION

The following steps are intended as a basic guide to machine operation, and are not to be considered a complete guide to concrete finishing. We suggest that all operators (experienced and novice) read "*Slabs on Grade*" published by the **American Concrete Institute, Detroit, Michigan**. Read the "Training" section of this manual for more information.

PITCHING THE BLACES

Quick Pitch Handle

To pitch the blades upward using the "*Quick-Pitch™*" *pitch handle*, (Figure 28) simply squeeze the trigger lock and pull the *pitch handle* toward the operator. Pushing the *pitch handle* toward the engine will cause the blades to lay flat.

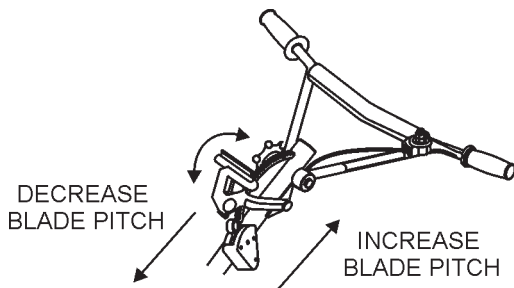


Figure 28. Quick-Pitch™ T- Handle

Standard Handle

To pitch the blades upward using the "*Standard*" handle, (Figure 29) simply turn the *star-wheel* clockwise. Turning the star wheel counter clockwise will cause the blades to lay flat.

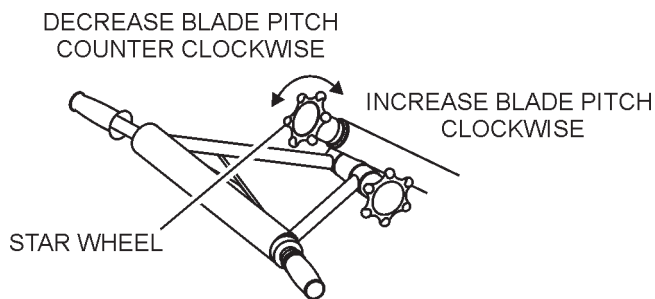


Figure 29. Standard Handle

Maneuvering the Trowel

1. Get into the operator's position behind the handle. With a secure foothold and a firm grasp on the handles slowly increase the engine speed until the desired blade speed is obtained.
2. To maneuver the trowel, gently lift up on or press down on the main trowel handle. To move the machine to the operator's left, **lift up** on the handle, to move machine to the right, **push down** on the handle.
3. The best method for finishing concrete is to slowly walk backwards (Figure 30) with the trowel, guiding the trowel from side to side. This will cover all footprints on wet concrete.
4. Remember that if you let go of the trowel, just step away and let the trowel come to a complete stop before trying to recover the trowel. See (Figure 26) to see the area around the trowel to keep clear of.

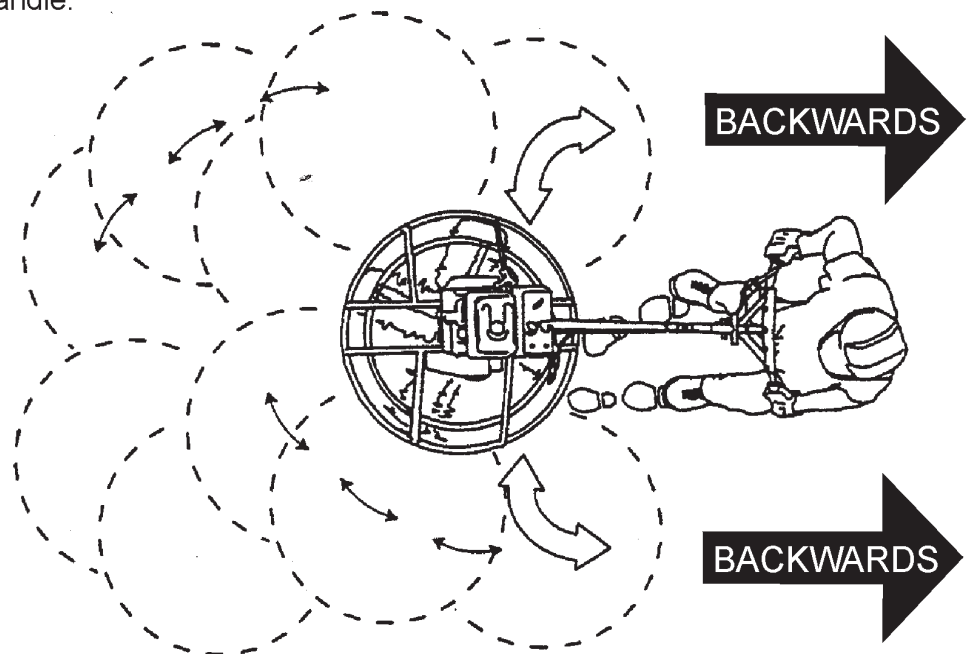
HPHA36C5H TROWEL — OPERATION

(Figure 30) below illustrates a typical walk-behind trowel application. Practice maneuvering the trowel. The trick is to let the trowel do the work.

Continue to practice maneuvering the trowel. Try to practice as if you were finishing a slab of concrete. Practice edging and covering a large area. Remember a good finishing technique is to work backwards. Be careful when moving backwards so that hazards can be avoided. The best way to get accustomed to the trowel is repeated use.

To move the trowel to the operator's left, **lift up** on the handle, to move the trowel to the right **push down** on the handle.

Remember! that if you let go of the trowel, just **step away** and let the trowel come to a complete **STOP** before trying to recover the trowel.



The best method for finishing concrete is to slowly walk **backwards** with the trowel, guiding the trowel from side to side. This will cover all footprints on wet concrete.

Figure 30. Maneuvering The Trowel

CAUTION

NEVER place your **feet** or **hands** inside the guard rings while starting or operating this equipment.

CAUTION

ALWAYS keep clear of **rotating** or **moving** parts while operating this equipment.

HPHA36C5H TROWEL — OPTIONS

Blades



Blades should be changed when they fail to finish concrete in a satisfactory manner.

Blades are a vital part of finishing concrete. This trowel, or **finisher**, has been designed to finish concrete and the blades are built to stringent quality standards out of the finest trowel steel. If you need replacement blades, consult your parts list for part numbers and order them from your Multiquip parts dealer or importer.

Combo Blades

This trowel was equipped with combination **float/finish** (Figure 31) blades as original equipment. These blades have been designed for optimum performance in both the floating and finishing operations. These blades are versatile and should take care of most troweling needs.

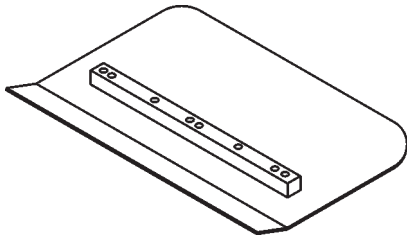


Figure 31. Combination Blade

Finish Blades (Optional)

These blades (Figure 32) have been specifically designed for finish operations with this trowel. They will provide a premium surface finishing capability from your trowel. They should only be used after the concrete has set to the point where the trowel does not sink into the concrete when placed on it.

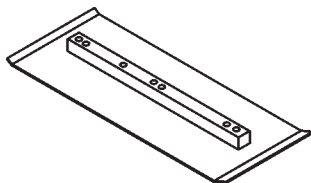


Figure 32. Finish Blade

Clip-On Float Blades (Optional)

These blades will clip (Figure 33) on to an existing installed blade, allowing your finisher to float on “wet” concrete so that the troweling operation can begin as early as possible. They are easily removable, so that after the floating operation, when the concrete is sufficiently cured, they can be removed to expose the finish blades for continued troweling.

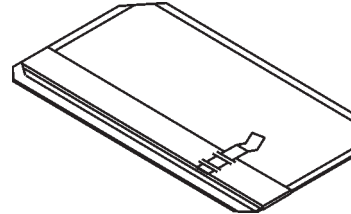


Figure 33. Clip-On Float Blade

Float Discs (Optional)

These round discs (Figure 34) attach to the spiders and allow the machine to “float” on “wet” concrete. The disc design allows early floating and easy movement from wet to dry areas. They are also very effective in embedding large aggregates and surface hardeners.

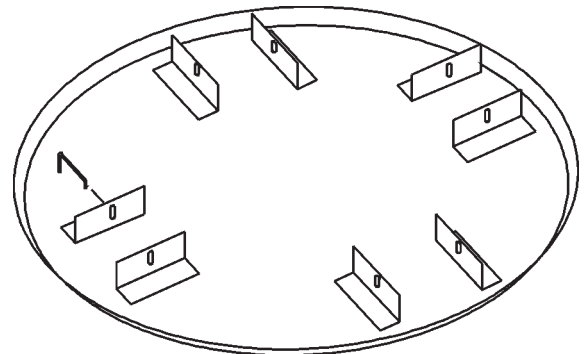


Figure 34. Float Disk

Grinding Attachments

Available grinding attachments are used for grinding surface imperfections or joints. These attachments allow greater utilization of your trowel. (Figure 35) illustrates a typical grinding disk assembly, complete with hub and stone mounting plate.

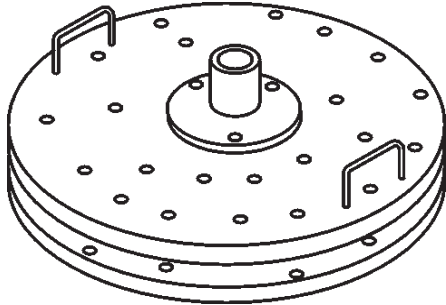


Figure 35. Grinding Disk

Trowel Arm Adjustment Tool

If blades show uneven wear patterns or some tend to wear out faster than others, the trowel arms may need to be adjusted. Whiteman makes a special tool (Figure 37) that will adjust all of the trowel arms consistently. The Trowel Arm Fixture P/N is 1817.

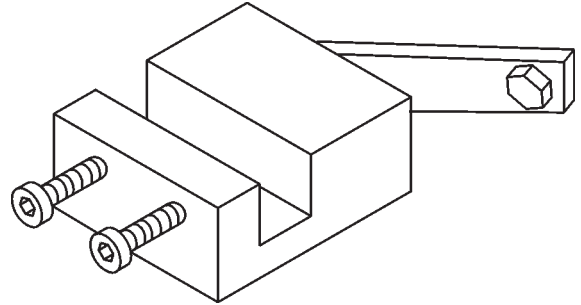


Figure 37. Trowel Arm Adjustment Fixture

Lifting Bail

There is a heavy duty, center balance type lifting bail (Figure 36) made specifically for your trowel. These bails are ideal for lifting and transporting your trowel. They are designed to lift the finisher and balance it on its center of gravity, providing great stability while lifting. This option is not available on electric trowel models.

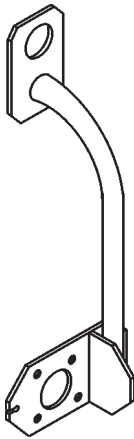
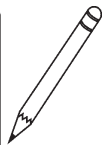
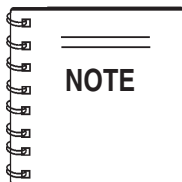


Figure 36. Lifting Bail

HPHA36C5H TROWEL — MAINTENANCE



See the engine manual supplied with your machine for appropriate engine maintenance schedule and troubleshooting guide for problems.

At the front of the book (Page 7) there is a “**Daily Pre-Operation Checklist**”. Make copies of this checklist and use it on a daily basis.

CAUTION

ALWAYS allow the engine to cool before servicing. **NEVER** attempt any maintenance work on a **hot!** engine.



MAINTENANCE SCHEDULE

Daily (8-10 Hours)

1. Check the oil level in the engine crankcase and gear box, fill as necessary.
2. Check V-belt.

Weekly (50-60 Hours)

1. Relube arms, thrust collar and clutch.
2. Replace blades if necessary.
3. Check and clean or replace the engine air filter as necessary.
4. Replace engine oil and filter as necessary, see engine manual.

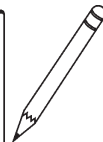
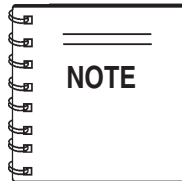
Monthly (200-300 Hours)

1. Remove, clean, reinstall and relube the arms and thrust collar. Adjust the blade arms.
2. Remove, clean, reinstall clutch.

Yearly (2000-2500 Hours)

1. Check and replace if necessary the arm bushings, thrust collar bushings and shaft seals.
2. Check pitch control cables for wear.

Trowel Arm Adjustment Procedure



The following procedure should be followed to adjust trowel arms when it becomes apparent that the trowel is finishing poorly or in need of routine maintenance.

A **flat and level**, clean area to test the trowel prior to and after is essential. Any unlevel **spots** in the floor or debris under the trowel blades will give an incorrect perception of adjustment. Ideally, a 5' x 5', three-quarter inch thick **flat** steel plate should be used for testing.

1. To determine which blades need adjustment, place the trowel in the test area (three-quarter inch thick plate) and look for the following conditions:
 - Pitch the blades as flat as possible and look at the **adjustment bolts**. They should all barely make contact with the **lower wear plate** on the spider. If you can see that one of them is not making contact, some adjustment will be necessary.
 - Is the machine wearing out blades unevenly (i.e. one blade appears worn while the others look new)?

(Figure 38) below illustrates “**worn spider bushings or bent trowel arms**”. Check to see that adjustment bolt is barely touching (0.10" max. clearance) lower wear plate. All alignment bolts should be spaced the same distance from the lower wear plate.

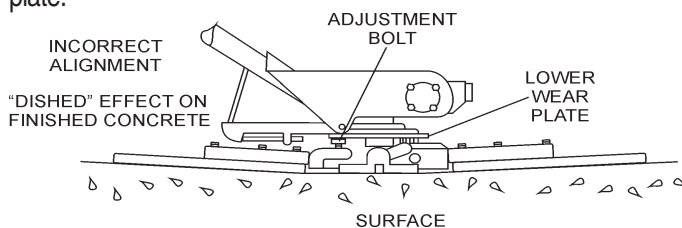


Figure 38. Worn Spider Plate

(Figure 39) below illustrates the “**correct alignment**” for a spider plate (as shipped from the factory).

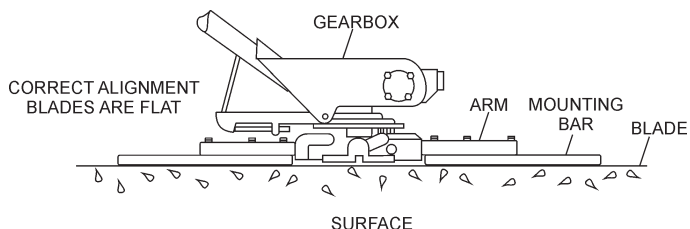


Figure 39. Correct Spider Plate Alignment

HPHA36C5H TROWEL — MAINTENANCE

2. Start engine, and bring trowel blades up to full speed and look for the following conditions:
 - Does the trowel have a perceived rolling or bouncing motion when in use?
 - Look at the trowel while it is running, does the guard ring “rock up and down” relative to the ground?

Spider Removal

If an adjustment is required, remove the spider assembly from the gearbox shaft as follows:

1. Locate the cone point square head set screw (Figure 40) and attached jam nut found on the side of the spider assembly.

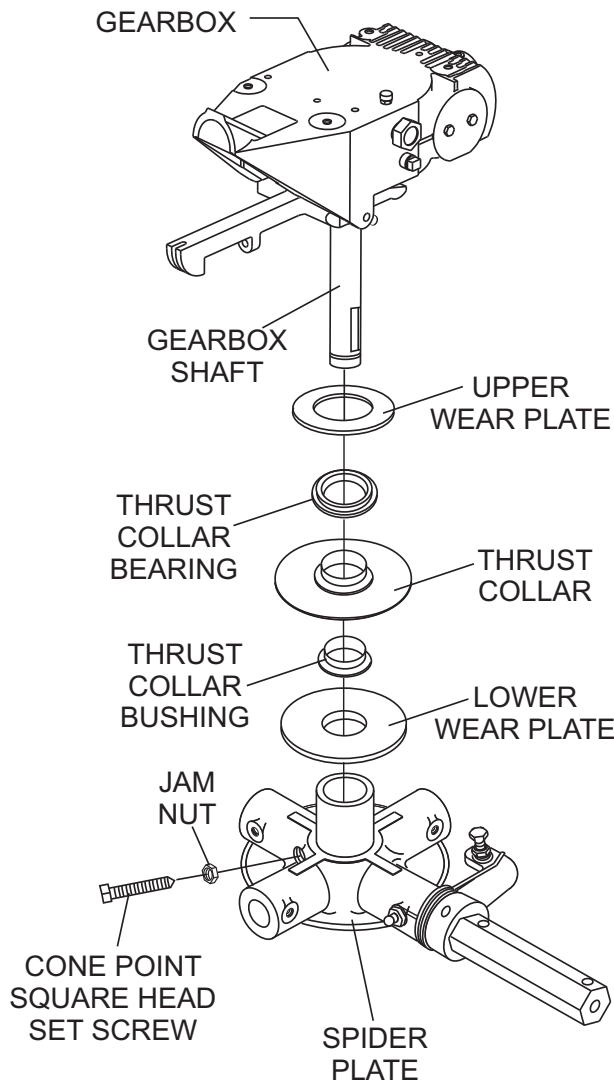


Figure 40. Spider/Gearbox Removal

2. Loosen the jam nut and cone point square head set screw, and carefully lift the **upper trowel assembly** off of the spider assembly. A slight tap with a rubber mallet may be necessary to dislodge the spider from the main shaft of the gearbox.

Trowel Arm Removal

1. Each trowel arm is held in place at the spider plate by a hex head bolt (zerk grease fitting). Remove the hex head bolt (Figure 41) from the spider plate.
2. Remove the trowel arm from the spider plate.

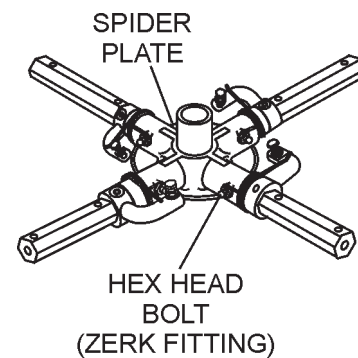


Figure 41. Removing Roll Pin and Zerk Grease Fitting

3. If the trowel arm inserts (bronze bushing) come out with the trowel arm, remove the bushing from the trowel arm and set aside in a safe place. If the bushing remains inside the spider plate, carefully remove the bushing.
4. Examine the bronze trowel arm bushing insert (Figure 42), and clean if necessary. Replace the bushing if it is out of round or worn.

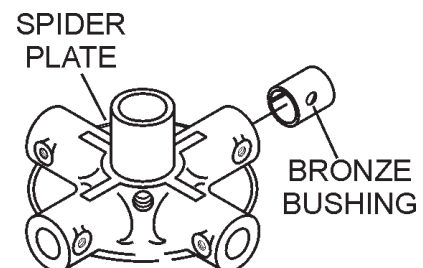


Figure 42. Bronze Bushings

HPHA36C5H TROWEL — MAINTENANCE

Trowel Blade Removal

1. Remove the trowel blades from the trowel arm by removing the three hex head bolts (Figure 43) from the trowel arm. Set blades aside.

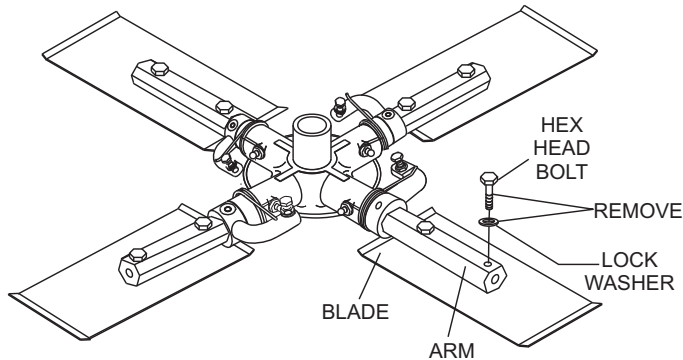


Figure 43. Trowel Blades

2. **Wire brush** any build-up of concrete from all six sides of the trowel arm. Repeat this for the remaining three arms.

Trowel Arm Flatness Test

1. Using a piece of 3/4 inch thick steel plate or any surface which is **true** and **flat**, check all **faces** of each trowel arm for flatness.
2. Check the blade-mounting sides of the trowel arm (hex section only) using a ten thousandths of an inch (max.) feeler gauge (Figure 44) between the flat of the trowel arm and an **extremely flat** test surface.

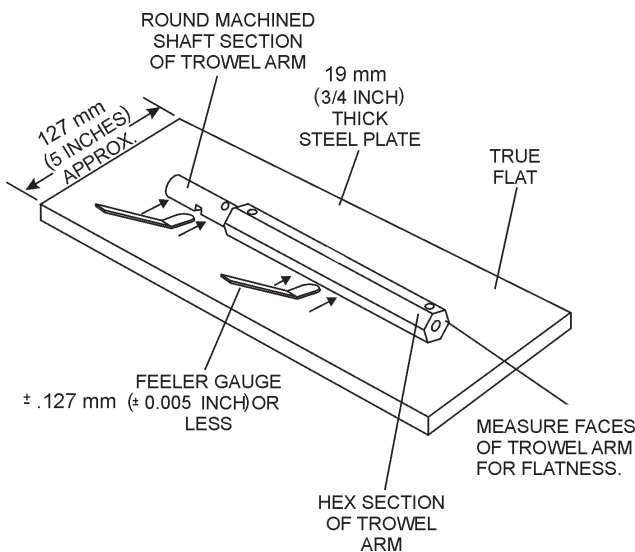
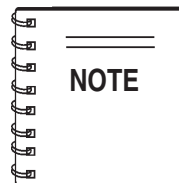


Figure 44. Trowel Arm Flatness Test

3. If the trowel arm is found to be **uneven** or **bent**, replace the trowel arm. A bent trowel arm will not allow the trowel to operate in a smooth fluid rotation.
4. Next, check each of the six sides of the round machined shaft section of the trowel arm. Each section should have the **same clearance** between the round of the trowel arm shaft and the test surface.



Trowel arms can be damaged by rough handling or by striking exposed plumbing or forms while in operation. **ALWAYS** look-out for objects which might cause damage to the trowel arms.

Trowel Arm Adjustment

Shown in (Figure 45) is the adjustment fixture with a trowel arm inserted. As each trowel arm is locked into the fixture, the arm bolt is adjusted to where it contacts a stop on the fixture. This will consistently adjust all of the trowel arms, keeping the finisher as flat and evenly pitched as possible.

1. Locate the trowel arm adjustment tool P/N 1817. Check the adjusting bolt/fixture arm distance is correct for your trowel. Adjust to specifications shown in Figure 45.

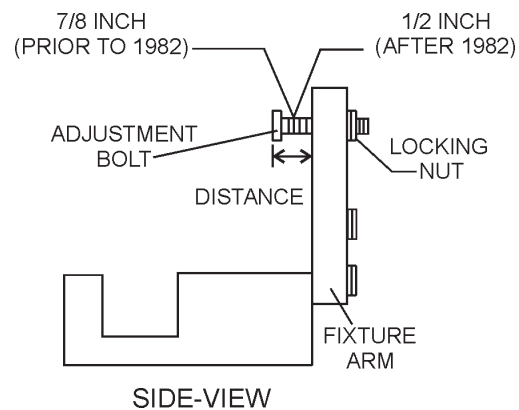
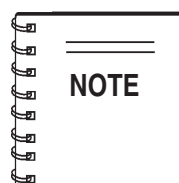


Figure 45. Trowel Arm Adjustment Tool Side View

2. Ensure the fixture arm is in the proper setting (up or down) for your trowel arm rotation as shown in Figure 46.



Arms with **CLOCK-WISE** blade rotation use the fixture arm in the **UP** position (A in Figure 46). Arms with **COUNTER CLOCK-WISE** blade rotation use the fixture with the fixture arm in the **DOWN** position. (B in Figure 46).

HPHA36C5H TROWEL — MAINTENANCE

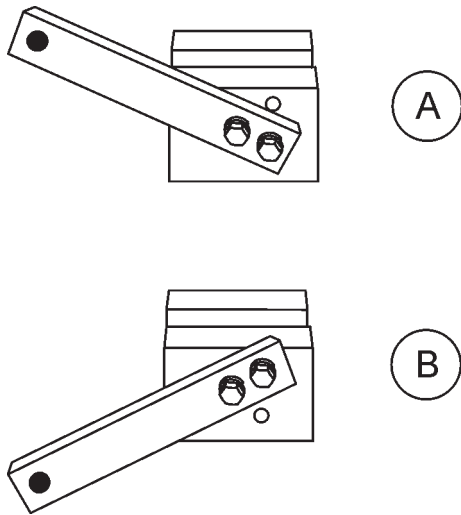


Figure 46. Trowel Arm Adjustment Setup

3. Unscrew the locking bolts on the adjustment tool and place the trowel arm into the fixture channel as shown in Figure 47. A **thin shim** may be required to cover the blade holes on the trowel arm. Make sure to align the **trowel** adjustment bolt with the **fixture** adjustment bolt.

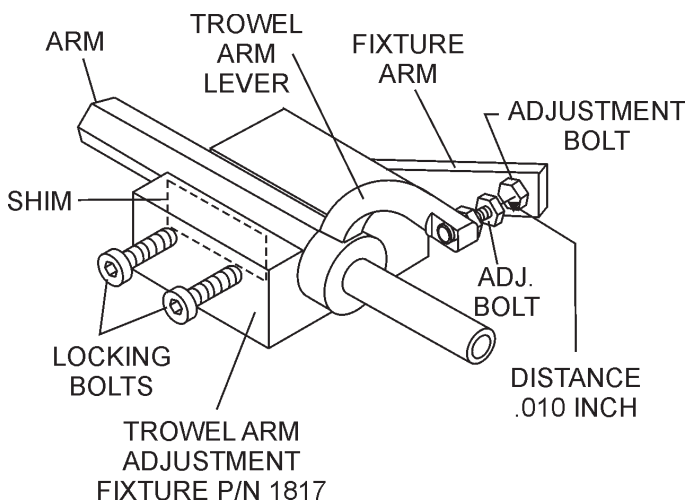


Figure 47. Trowel Arm Adjustment Fixture Components

4. Use an allen wrench to tighten the locking bolts securing the trowel arm in place.
5. Loosen the locking nut on the trowel arm lever, then turn the trowel arm adjusting bolt until it barely touches (.010") the fixture adjusting bolt.

6. Once the correct adjustment is made, tighten the lock nut on the trowel arm to lock in place.
7. Loosen locking nuts on the adjustment fixture, and remove trowel arm.
8. Repeat steps for the remaining trowel arms.

Re-Assembly

1. Clean and examine the upper/lower wear plates and thrust collar. Examine the entire spider assembly. Wire brush any concrete or rust build-up. If any of the spider components are found to be damaged or out of round, replace them.
2. Make sure that the bronze trowel arm bushing is not damage or out of round. Clean the bushing if necessary. If the bronze bushing is damage or worn, replace it.
3. Reinstall bronze bushing onto trowel arm.
4. Repeat steps 2-3 for each trowel arm.
5. Make sure that the spring tensioner is in the correct position to exert tension on the trowel arm.
6. Insert all trowel arms with levers into spider plate (with bronze bushing already installed) using care to align grease hole on bronze bushing with grease hole fitting on spider plate.
7. Lock trowel arms in place by tightening the hex head zerk grease fitting and jam nut.
8. Re-install the blades back onto the trowel arms.
9. Install stabilizer ring onto spider assembly.
10. Reinstall **lower wear plate**, **thrust collar** and **upper wear ring** in the **reverse order** that they were dis-assembled onto the spider shaft. Make sure that there is little or no lateral movement between the thrust collar and the spider shaft.
11. Carefully lift the **upper trowel assembly**, line up the key-way on gear box main shaft and insert into spider assembly.
12. Reinstall square head cone point into spider plate and tighten in place. Tighten jam nut. Use care in making sure point of set screw engages groove in gear box main shaft.
13. Lubricate all grease points (zerk fittings) with premium "**Lithum 12**" based grease, conforming to NLG1 Grade #2 consistency.

HPHA36C5H TROWEL — MAINTENANCE

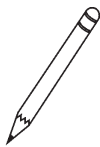
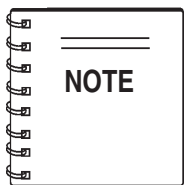
Testing

1. Place trowel in test area, start engine and test trowel for smoothness.
2. If trowel bounces has excessive vibration or does not run smoothly repeat alignment procedure.

Changing a Blade

Whiteman recommends that **all the blades be changed at the same time**. The machine may wobble or bounce if only some of the blades are changed at one time.

1. Place the machine on a flat, level surface. Adjust the blade pitch control to make the blades as flat as possible. Note the blade orientation on the trowel arm.



Before removing the blades, please note the orientation of the blade on the trowel arm.

2. Remove the three bolts and lock washers that secure the blade to the trowel arm. Remove the blade.
3. Using a wire brush, scrape all concrete particles and foreign debris from the trowel arm.
4. Install the new trowel blade onto the trowel arm. Make sure blade is installed correctly, maintaining the proper orientation for direction of rotation.
5. Reinstall the three bolts and lock washers that secure the blade to the trowel arm. Tighten all three bolts securely.
6. Repeat steps 2-5 for all remaining blades.

Changing The V- Belt

1. Unscrew the two (2) t-bolts from the belt guard and remove the lockwashers.(Figure 46).

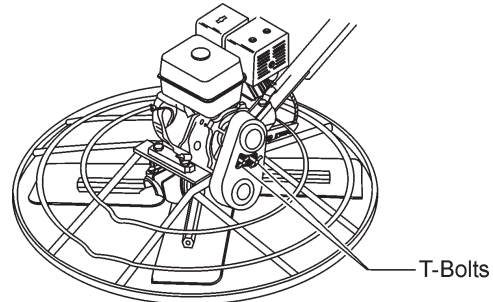
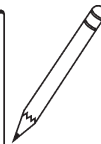
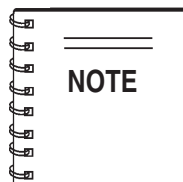


Figure 48. Removing The Belt Guard

2. Work belt around and off the bottom pulley and remove belt.
3. Replace with the appropriate belt for your machine:
HPHA36C5H uses p/n 1390 (A-26)
4. Place the belt in the groove of the upper pulley then work the belt over the bottom pulley into place.



The V-Belt will tension itself automatically during operation. **NO FURTHER ADJUSTMENT OR TENSIONING IS NECESSARY.**

5. Replace the belt guard, lockwashers, and secure with the T-bolts.

⚠ WARNING

NEVER operate equipment with covers, or guards removed. Keep **fingers, hands, hair** and **clothing** away from all moving parts to prevent injury.



HPHA36C5H TROWEL — TROUBLESHOOTING (TROWEL)

TABLE 4. TROUBLESHOOTING

SYMPTOM	POSSIBLE PROBLEM	SOLUTION
Engine running rough or not at all.	Safety switch malfunction?	Make sure that the safety switch is ON or replace switch if necessary.
	Fuel?	Look at the fuel system. Make sure there is fuel being supplied to the engine. Check to ensure that the fuel filter is not clogged.
	Ignition?	Check to ensure that the ignition switch has power and is functioning correctly.
Safety switch not functioning.	Bad contacts?	Replace switch.
	Loose wire connections?	Check wiring. Replace as necessary.
	Other problems?	Consult engine manufacturer's manual.
If trowel "bounces, rolls concrete, or makes uneven swirls in concrete".	Blades?	Make certain blades are in good condition, not excessively worn. Finish blades should measure no less than 2" (50mm) from the blade bar to the trailing edge, combo blades should measure no less than 3.5" (89mm). Trailing edge of blade should be straight and parallel to the blade bar.
	Spider?	Check that all blades are set at the same pitch angle as measured at the spider. A field adjustment tool is available for height adjustment of the trowel arms, (see Optional Equipment).
	Bent trowel arms?	Check the spider assembly for bent trowel arms. If one of the arms is even slightly bent, replace it immediately.
	Trowel arm bushings?	Check the trowel arm bushings for tightness. This can be done by moving the trowel arms up and down. If there is more than 1/8" (3.2 mm) of travel at the tip of the arm, the bushings should be replaced. All bushings should be replaced at the same time.
	Thrust collar?	Check the flatness of the thrust collar by rotating it on the spider. If it varies by more than 0.02" (0.5 mm) replace the thrust collar.
	Thrust collar bushing?	Check the thrust collar by rocking it on the spider. If it can tilt more than 3/32" (2.4 mm) [as measured at the thrust collar O.D.], replace the bushing in the thrust collar.
	Thrust bearing worn?	Check the thrust bearing to see that it is spinning free. Note: Thrust cap, replace if necessary.
Machine has a perceptible rolling motion while running.	Main shaft?	The main output shaft of the gearbox assembly should be checked for straightness. The main shaft must run straight and cannot be more than 0.003" (0.08 mm) out of round at the spider attachment point.
	Yoke?	Check to make sure that both fingers of the yoke press evenly on the wear cap. Replace yoke as necessary.
	Blade Pitch?	Check to ensure that each blade is adjusted to have the same pitch as all other blades. Adjust per maintenance section in manual.

HPHA36C5H TROWEL — TROUBLESHOOTING (TROWEL)

TABLE 4. TROUBLESHOOTING (CONTINUED)

SYMPTOM	POSSIBLE PROBLEM	SOLUTION
Clutch slipping or sluggish response to engine speed change.	Worn V-belts?	Replace V-belt.
	Dirty centrifugal clutch?	Disassemble and clean clutch.
	Defective or worn out centrifugal clutch?	Replace entire clutch.
	Worn bearings in gearbox?	Rotate input shaft by hand. If shaft rotates with difficulty, check the input and output shaft bearings. Replace as necessary.
	Worn or broken gears in gearbox?	Verify that the gearbox shaft rotates when the input shaft is rotated. Replace both the worm and worm gear as a set.

HPHA36C5HTROWEL — TROUBLESHOOTING (ENGINE)

TABLE 5. TROUBLESHOOTING (ENGINE)

SYMPTOM	POSSIBLE CAUSE	SOLUTION
Difficult to start, "fuel is available, but no SPARK at spark plug".	Spark plug bridging?	Check gap, insulation or replace spark plug.
	Carbon deposit on spark plug?	Clean or replace spark plug.
	Short circuit due to deficient spark plug insulation?	Check spark plug insulation, replace if worn.
	Improper spark plug gap?	Set to proper gap.
	Ignition coil defective?	Replace ignition coil.
Difficult to start, "fuel is available, and SPARK is present at the spark plug".	ON/OFF switch is shorted?	Check switch wiring, replace switch.
	Improper spark gap, points dirty?	Set correct spark gap and clean points.
	Condenser insulation worn or short circuiting?	Replace condenser.
	Spark plug wire broken or short circuiting?	Replace defective spark plug wiring.
Difficult to start, "fuel is available, spark is present and compression is normal".	Wrong fuel type?	Flush fuel system, and replace with correct type of fuel.
	Water or dust in fuel system?	Flush fuel system.
	Air cleaner dirty?	Clean or replace air cleaner.
	Choke Open?	Close Choke.
Difficult to start, "fuel is available, spark is present and compression is low".	Suction/exhaust valve stuck or protruded?	Re-seat valves.
	Piston ring and/or cylinder worn?	Replace piston rings and or piston.
	Cylinder head and/or spark plug not tightened properly?	Torque cylinder head bolts and spark plug.
	Head gasket and/or spark plug gasket damaged?	Replace head and spark plug gaskets.
No fuel present inside priming bulb.	Fuel not available in fuel tank?	Fill with correct type of fuel.
	Fuel filter clogged?	Replace fuel filter.
	Fuel tank cap breather hole clogged?	Clean or replace fuel tank cap.
	Air in fuel line?	Bleed fuel line.

HPHA36C5HTROWEL — EXPLANATION OF CODES

The following section explains the different symbols and remarks used in the Parts section of this manual. Use the help numbers found on the back page of the manual if there are any questions.

NOTICE

The contents and part numbers listed in the parts section are subject to change **without notice**. Multiquip does not guarantee the availability of the parts listed.

SAMPLE PARTS LIST

NO.	PART NO.	PART NAME	QTY.	REMARKS
1	12345	BOLT.....	1	INCLUDES ITEMS W/%
2%		WASHER, 1/4 IN.....		NOT SOLD SEPARATELY
2%	12347	WASHER, 3/8 IN....	1	MQ-45T ONLY
3	12348	HOSE	A/R	MAKE LOCALLY
4	12349	BEARING	1	S/N 2345B AND ABOVE

NO. Column

Unique Symbols — All items with same unique symbol

(@, #, +, %, or >) in the number column belong to the same assembly or kit, which is indicated by a note in the “Remarks” column.

Duplicate Item Numbers — Duplicate numbers indicate multiple part numbers, which are in effect for the same general item, such as different size saw blade guards in use or a part that has been updated on newer versions of the same machine.

NOTICE

When ordering a part that has more than one item number listed, check the remarks column for help in determining the proper part to order.

PART NO. Column

Numbers Used — Part numbers can be indicated by a number, a blank entry, or TBD.

TBD (To Be Determined) is generally used to show a part that has not been assigned a formal part number at the time of publication.

A blank entry generally indicates that the item is not sold separately or is not sold by Multiquip. Other entries will be clarified in the “Remarks” Column.

QTY. Column

Numbers Used — Item quantity can be indicated by a number, a blank entry, or A/R.

A/R (As Required) is generally used for hoses or other parts that are sold in bulk and cut to length.

A blank entry generally indicates that the item is not sold separately. Other entries will be clarified in the “Remarks” Column.

REMARKS Column

Some of the most common notes found in the “Remarks” Column are listed below. Other additional notes needed to describe the item can also be shown.

Assembly/Kit — All items on the parts list with the same unique symbol will be included when this item is purchased.

Indicated by:

“INCLUDES ITEMS W/(unique symbol)”

Serial Number Break — Used to list an effective serial number range where a particular part is used.

Indicated by:

“S/N XXXXX AND BELOW”

“S/N XXXX AND ABOVE”

“S/N XXXX TO S/N XXX”

Specific Model Number Use — Indicates that the part is used only with the specific model number or model number variant listed. It can also be used to show a part is NOT used on a specific model or model number variant.

Indicated by:

“XXXXX ONLY”

“NOT USED ON XXXX”

“Make/Obtain Locally” — Indicates that the part can be purchased at any hardware shop or made out of available items. Examples include battery cables, shims, and certain washers and nuts.

“Not Sold Separately” — Indicates that an item cannot be purchased as a separate item and is either part of an assembly/kit that can be purchased, or is not available for sale through Multiquip.

HPHA36C5H TROWEL — SUGGESTED SPARE PARTS

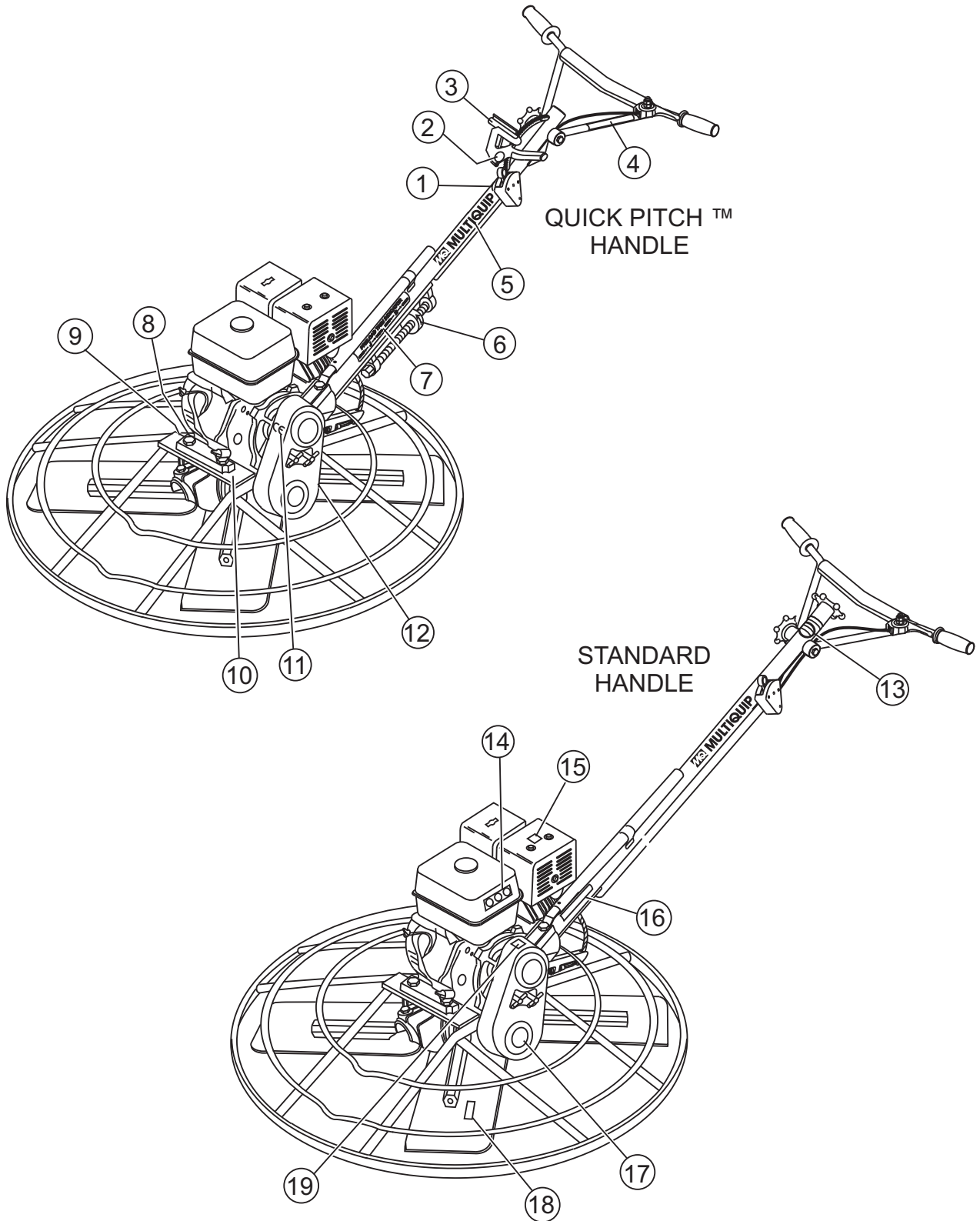
HPHA36C5H TROWEL 1 TO 3 UNITS WITH
HONDA GX-160K1QX2 ENGINE.

1 to 3 Units

Qty.	P/N	Description
1	20478	GRIP, LEFT
2	20856	SAFETY SWITCH
1	20285	CABLE STANDARD HANDLE
1	20297	CABLE QUICK-PITCH™
1	20435	THROTTLE CABLE
4	1157 A	BUSHING
4	1162 A	LUBE CAP
4	1167 A	SCREW
4	1456	NUT
4	1875	WASHER
4	1322	SCREW
1	21046	GASKET KIT
1	21047	BEARING KIT
4	1247	RUBBER GROMMET
4	1245	SPACER
1	2826	ARM (9-1/2")
2	1390	BELT (A-26)
1	10968	THRUST COLLAR KIT

HPHA36C5H TROWEL — NAMEPLATE AND DECALS

NAMEPLATES AND DECALS



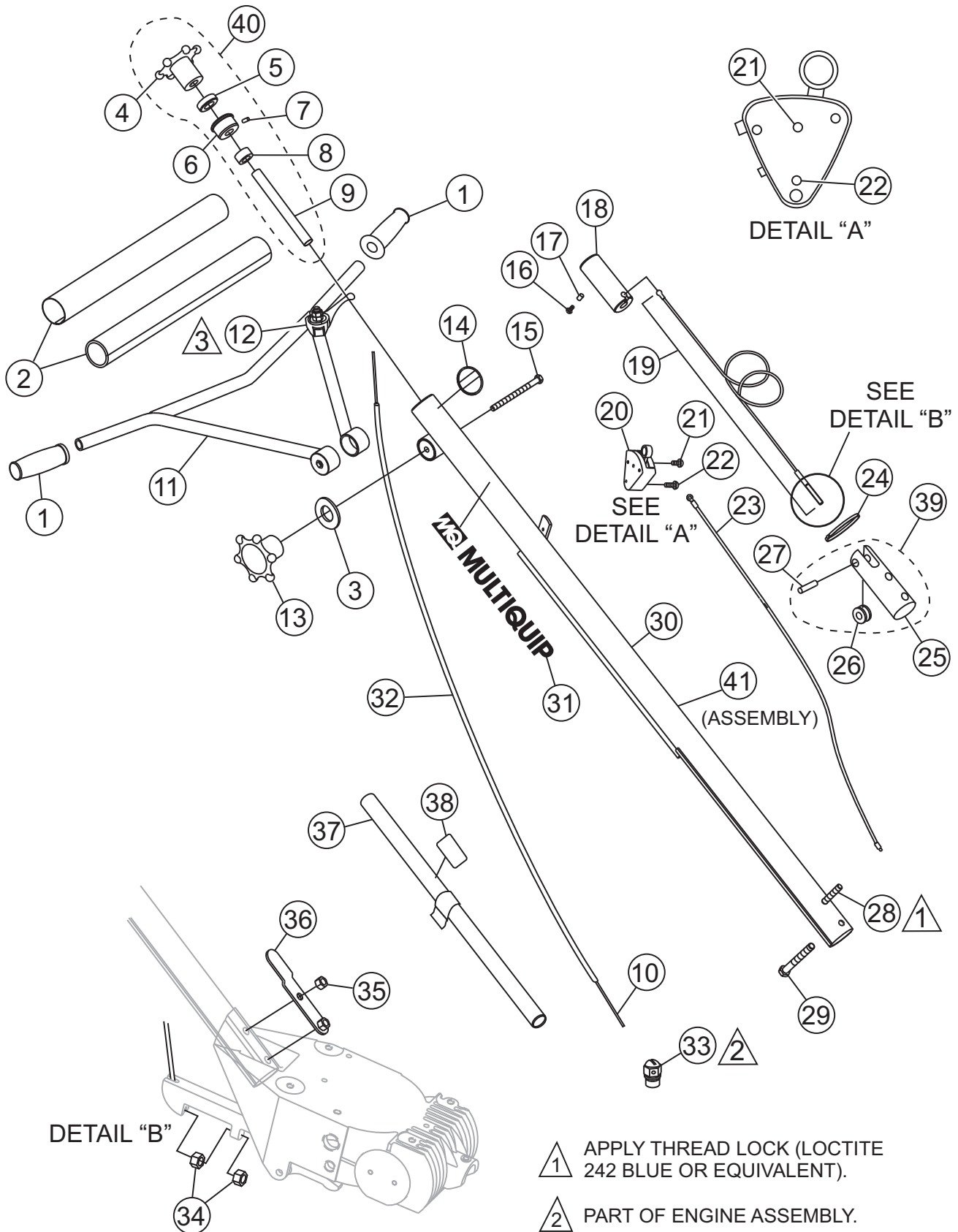
HPHA36C5H TROWEL — NAMEPLATE AND DECALS

NAMEPLATE AND DECALS

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	1758	DECAL: QUICK-PITCH™ HANDLE	1	
2	20815	DECAL: QUICK-PITCH™ HANDLE INSERT	2	
3	20527	DECAL: QUICK-PITCH™ WARNING	1	
4	20526	DECAL: QUICK-PITCH™ LATCH WARNING	1	
5	20814	DECAL: MQ MULTIQUIP 14"	1	
6	1736	DECAL: ARROWS	1	
7	1735	DECAL: PRE-LOAD INDICATOR	1	
8	11246	DECAL: OIL CHECK	1	PART OF DECAL KIT P/N 12620
9		NAMEPLATE	1	CONTACT MULTIQUIP SERVICE DEPT.
10	20816	DECAL: MQ MULTIQUIP (SMALL)	1	
11	11092	DECAL: CE	1	
12	11246	DECAL: GEAR DRIVE	1	PART OF DECAL KIT P/N 12620
13	1492	DECAL: STANDARD HANDLE (FINISHER)	1	
14	1147	DECAL: HELMET, FOOT AND GLOVE	1	PART OF DECAL KIT P/N 12620
15	11246	DECAL: HOT	1	PART OF DECAL KIT P/N 12620
16	1261	DECAL: CAUTION LIFT HANDLE	1	
17	20820	DECAL: POWER TROWEL	1	
18	2938	DECAL: METRIC	1	
19	11246	DECAL: BELT DRIVE	1	PART OF DECAL KIT P/N 12620

HPHA36C5HTROWEL — STANDARD HANDLE ASSY.

STANDARD HANDLE ASSY.



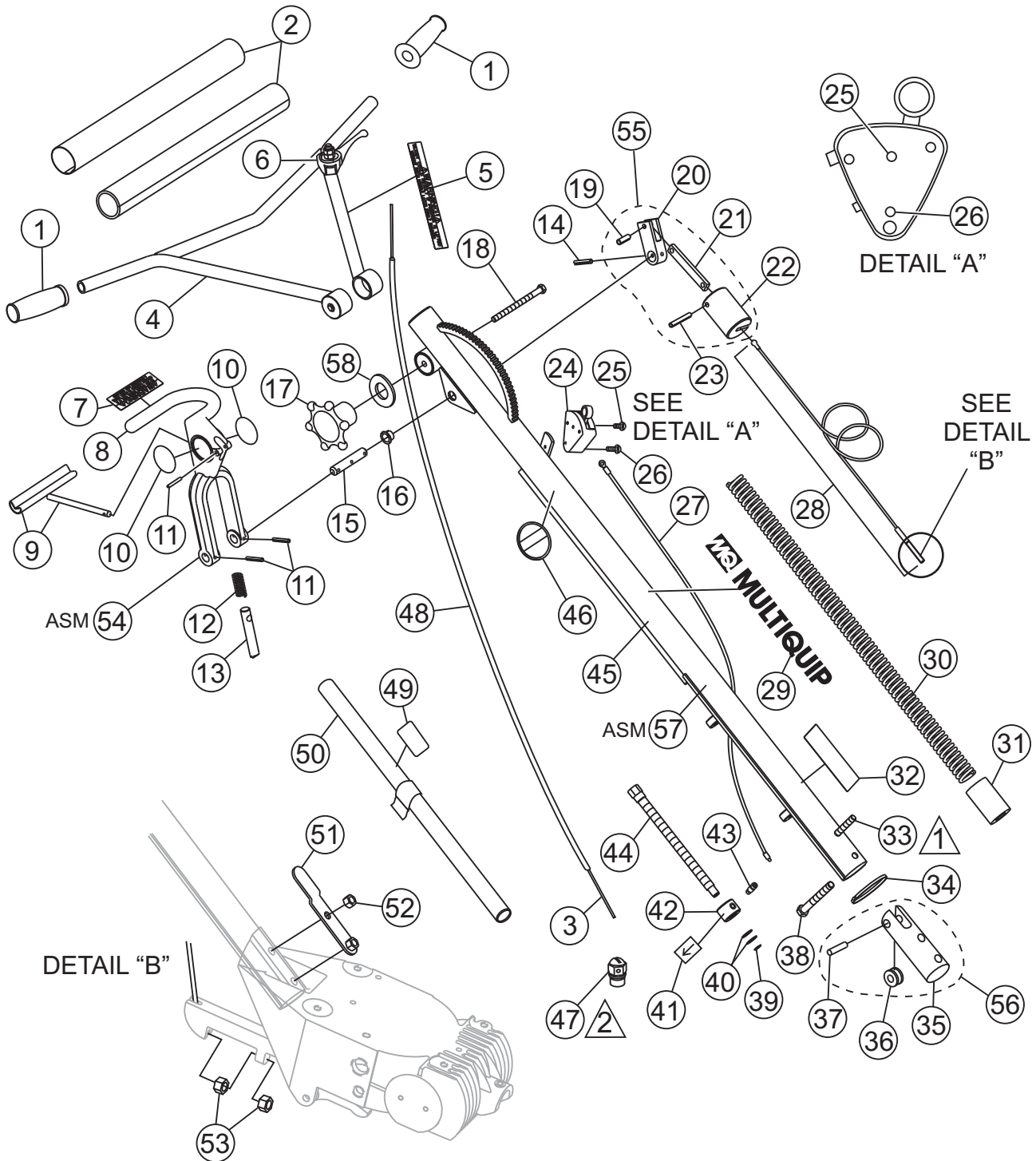
HPHA36C5H TROWEL — STANDARD HANDLE ASSY.

STANDARD HANDLE ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	20478	GRIP, HANDLE	2	
2	20774	COVER, PAD HANDLE	1	
3	3233	WASHER, FLAT	1	
4*	20817	WHEEL, HAND HANDLE	1	
5*	0281	BEARING, THRUST, NICE 607	1	
6*	20282	BEARING, TROWEL CONTROL	1	
7*	0122 C	SCREW, SHS 3/8-16 X 1/2	1	
8*	3615	COLLAR, SET 3/4 ID	1	
9*	1478	SHAFT, TROWEL CONTROL	1	
10	21172	CABLE, THROTTLE	1	
11	12556	HANDLE, ADJUSTABLE	1	
12	21171	THROTTLE	1	
13	20439	WHEEL ASSY., HAND	1	
14	1492	DECAL, CUSTOM 2 1/2 CHROME	1	
15	20438	SCREW, HHC 3/8-16 X 5.00	1	
16	0786	SCREW, BHC 1/4- 20 X 3/8 NYL PATCH, NP	1	
17	0786 A	SPACER, .360 X 17/64 X 1/8L	1	
18	20287	SLIDE BLOCK TROWEL CONTROL	1	
19	20285	CABLE ASSY., LENGTH 48.29" STD FINISHER	1	
20	20856	SWITCH ASSY., SAFETY STOP	1	INCLUDES ITEMS W/%
21%	1602	SCREW, RHM 10-24 X 3/8	1	
22%	20988	SCREW, FHSC PHILLIPS 8-32 X 1 1/4	1	
23	20514	WIRE ASSY., SAFETY STOP SWITCH	1	
24	1662	TIE, CABLE TY-RAP, BLACK	1	
25#	20275	BLOCK, SUPPORT	1	
26#	1118	PULLEY, SUPPORT BLOCK	1	
27#	20279	PIN, SUPPORT BLOCK 3/8 X 1.59	1	
28	21017	SCREW, HHC 3/8-16 X 3 1/2 FULL THREAD	1	
29	1493	SCREW, HHC 3/8-16 X 3 1/4	1	
30	12567	HANDLE, STD	1	
31	20814	DECAL, MQ MULTQUIP, 14"	1	
32	21173	HOUSING, CABLE 74"	1	
33	20845	SWIVEL, THROTTLE CABLE	1	
34	1116	NUT, BRASS JAM 5/16-18	2	
35	10133	NUT, NYLOC 3/8-16	1	
36	20392	BRACKET, LIFT TUBE	1	
37		HANDLE, LIFT ASSY.	1	NO LONGER AVAILABLE
38		DECAL, CAUTION, LIFT HANDLE	1	NO LONGER AVAILABLE
39	20280	BLOCK, CABLE ASSY.	1	INCLUDES ITEMS W/#
40	20819	HAND WHEEL ASSY., PITCH CONTROL	1	INCLUDES ITEMS W/*
41		HANDLE ASSY., STHAJB	1	CONTACT SALES DEPT.

HPHA36C5H TROWEL — QUICK-PITCH™ HANDLE ASSY.

QUICK-PITCH™ T-HANDLE ASSY.



▲ 1 APPLY THREAD LOCK (LOCTITE 242 BLUE OR EQUIVALENT).

▲ 2 PART OF ENGINE ASSEMBLY.

HPHA36C5H TROWEL — QUICK-PITCH™ HANDLE ASSY.

QUICK-PITCH™ HANDLE ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	20478	GRIP, HANDLE	2	
2	20774	COVER, PAD HANDLE	1	
3	21172	CABLE, THROTTLE	1	
4	12556	HANDLE, ADJUSTABLE	1	
5	20526	DECAL, LATCH WARNING	1	
6	21171	THROTTLE	1	
7	20527	DECAL, Q.P. WARNING	1	
8*	20389	HANDLE, QUICK-PITCH™	1	
9*	1746	TRIGGER, QP CHROMED	1	
10*	20815	DECAL, QUICK-PITCH™	2	
11	1729	PIN, ROLL 3/16 X 1 1/4	3	
12*	1706	SPRING, ENCLOSED QP CLAMP	1	
13*	20437	PIN, QP LATCH	1	
14	4568	PIN, ROLL 3/16 X 1	1	
15	1711	SHAFT, CONTROL QP	1	
16	1719	BUSHING, PIVOT PLATE	1	
17	20439	WHEEL ASSY., HAND	1	
18	20438	SCREW, HHC 3/8-16 X 5.00	1	
19+	1731	PIN, ROLL 1/4 X 3/4	1	
20+	20443	ARM, SLIDE CONTROL	1	
21+	1709	CONNECTOR, QP CONTROL ARM	1	
22+	20269	LINKAGE, QP CONTROL	1	
23+	20276	PIN, ROLL 1/4 X 1 3/4	1	
24	20856	SWITCH ASSY., SAFETY STOP	1	INCLUDES ITEMS W/%
25%	1602	SCREW, RHM 10-24 X 3/8	1	
26%	20988	SCREW, FHSC PHILLIPS 8-32 X 1 1/4	1	
27	20514	WIRE ASSY., SAFETY STOP SWITCH	1	
28	20297	CABLE ASSY., QP CONTROL, 45"	1	
29	20814	DECAL, MQ MULTIQIP, 14"	1	
30	1715	SPRING, COUNTER BALANCE	1	
31	20270	BLOCK, QP ADJUSTMENT	1	
32	1735	DECAL, PRELOAD TRIM INDICATOR	1	
33	21017	SCREW, HHC 3/8-16 X 3 1/2 FULL THREAD	1	
34	1662	TIE, CABLE, TY-RAP BLACK	1	
35#	20275	BLOCK, SUPPORT	1	
36#	1118	PULLEY, SUPPORT BLOCK	1	
37#	20279	PIN, SUPPORT BLOCK 3/8 X 1.59	1	
38	1493	SCREW, HHC 3/8-16 X 3 1/4	1	
39	1737	SNAP RING, TRUARC #5100-50	1	
40	1733	WASHER, 1/2 X 1/32, HARDENED	2	

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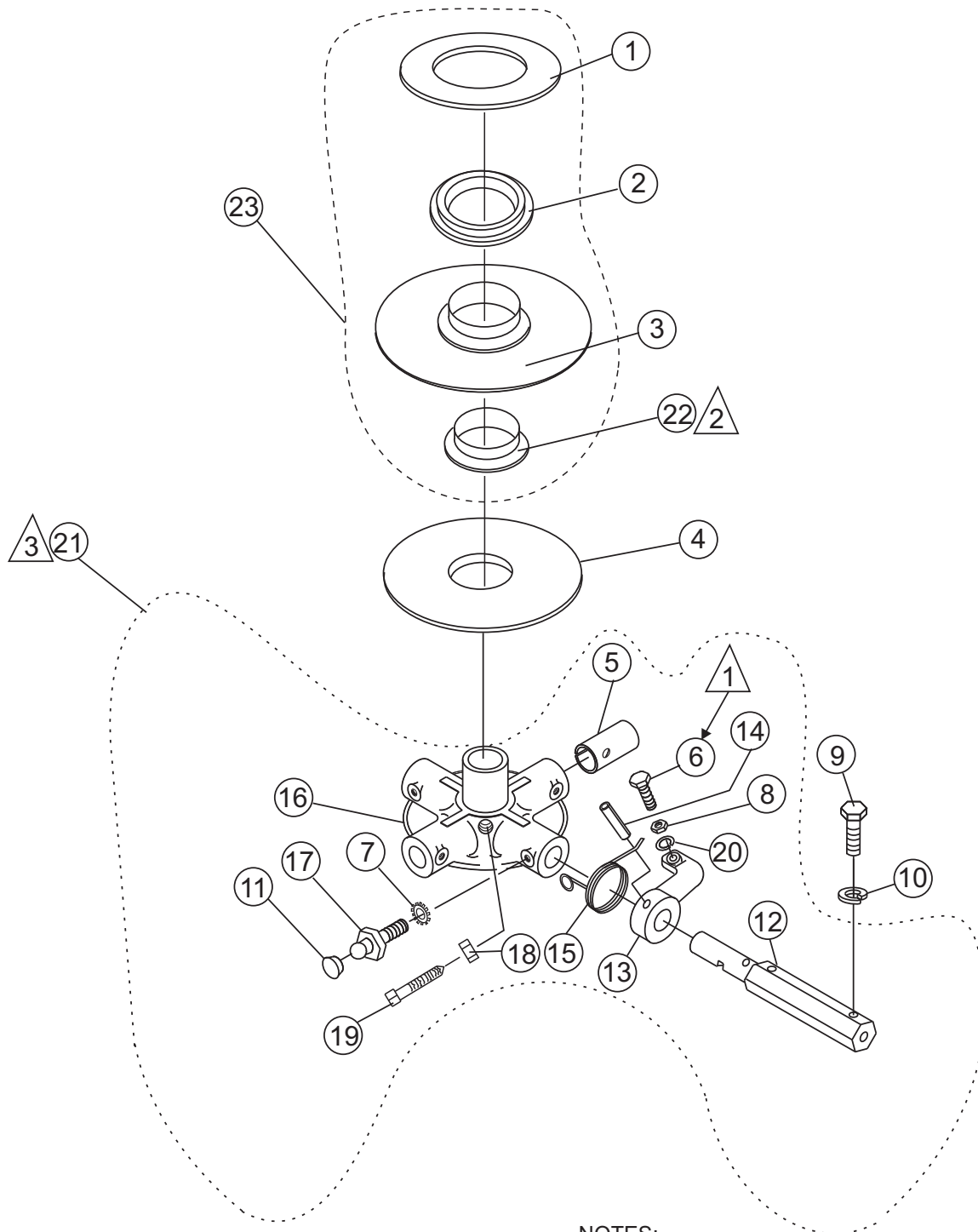
HPHA36C5HTROWEL — QUICK PITCH™ HANDLE ASSY.

QUICK PITCH HANDLE ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
41	1736	DECAL, ARROW	1	
42	1718	NUT, QP TRIM CTRL ADJ	1	
43	1732	BOLT, STRIPPER 3/8 X 1/2	1	
44	1717	SCREW, QP TRIM ADJUSTMENT	1	
45	12642	TUBE, MAIN HANDLE	1	
46	1758	DECAL, PATENT QP	1	
47	20845	SWIVEL, ENGINE THROTTLE CABLE	1	
48	21173	HOUSING, THROTTLE CABLE 74"	1	
49		DECAL, CAUTION, LIFT HANDLE	1	NO LONGER AVAILABLE
50		HANDLE, LIFT ASSY.	1	NO LONGER AVAILABLE
51	20392	BRACKET, LIFT TUBE	1	
52	10133	NUT, NYLOC 3/8-16	1	
53	1116	NUT, BRASS JAM 5/16-18	2	
54	20390	TRIGGER, QP ASSY.	1	INCLUDES ITEMS W/*
55	20293	LINKAGE, QP CONTROL ASSY.	1	INCLUDES ITEMS W/+
56	20280	BLOCK, CABLE ASSY.	1	INCLUDES ITEMS W/#
57		HANDLE ASSY., QPHAJB	1	CONTACT SALES DEPT.
58	3233	WASHER, FLAT	1	

HPHA36C5H TROWEL — 4-BLADE SPIDER ASSY.

4-BLADE SPIDER ASSY.



NOTES:

- ① APPLY LOCTITE P/N 1477
- ② INCLUDED WITH ITEM 3 OR CAN BE ORDERED SEPARATELY (P/N 1471).
- ③ SPIDER ASSEMBLY P/N 1215 INCLUDES ALL ITEMS WITHIN OUTLINE.

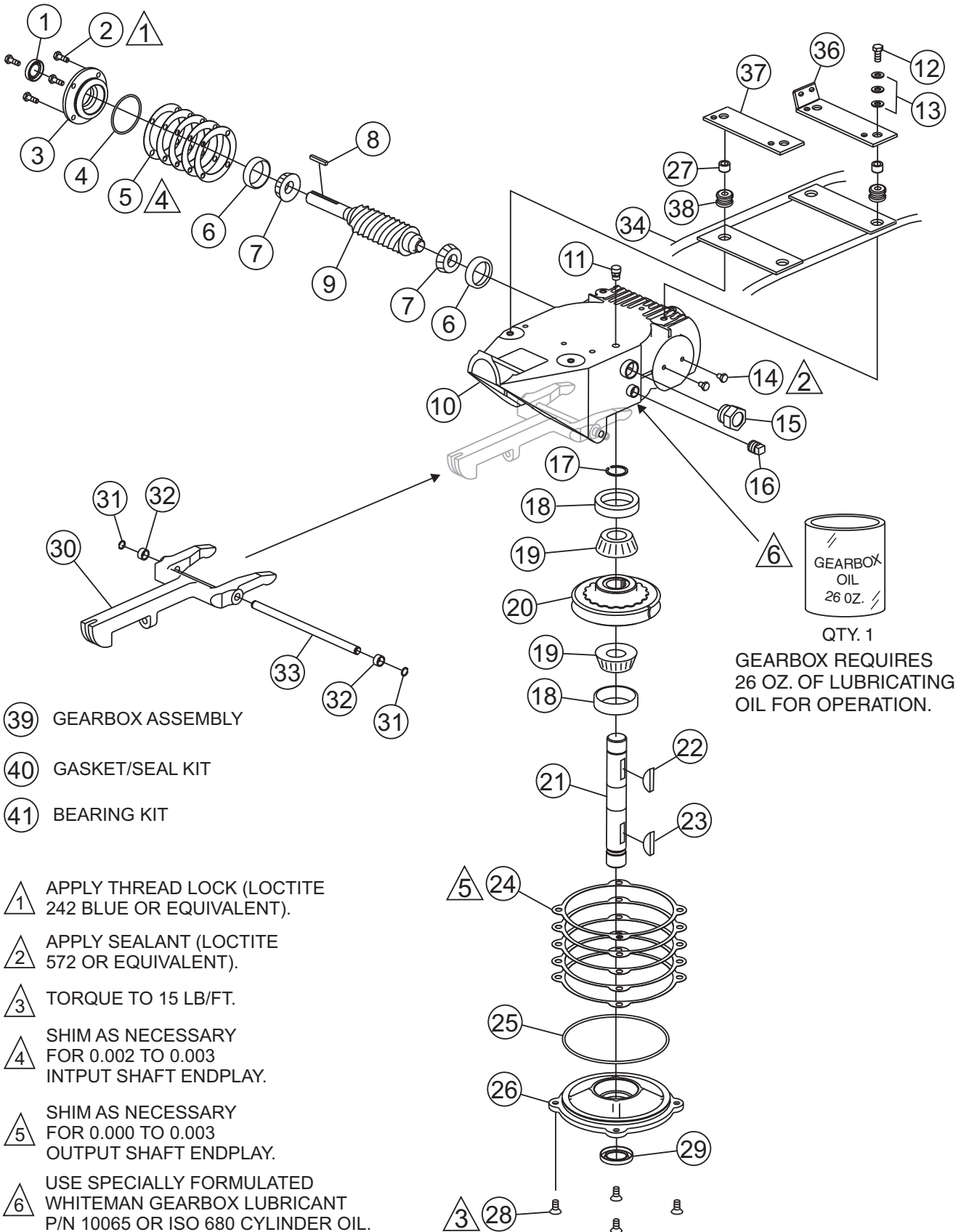
HPHA36C5H TROWEL — 4-BLADE SPIDER ASSY.

4-BLADE SPIDER ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1*	12208	WEAR RING	1	
2*	12778	FLANGE BEARING	1	
3*	10793	THRUST COLLAR	1	INCLUDES ITEMS W/#
4	1154 A	WEAR PLATE	1	
5%	1157 A	BUSHING INSERT	4	
6%	0164 B	RADIUS HEAD 3/8- 16 x 1-1/4"	4	FULL THREAD
7%	1875	INT. SHKP. WASHER 3/8"	4	
8%	1876	JAM NUT 3/8- 16	4	CLASS 2B
9	0105	HHCS 5/16- 18 x 1-1/2"	8	
10	0161 C	LOCK WASHER 5/16"	8	
11%	1162 A	LUBRA-CAP	4	
12%	2826	TROWEL ARM, 9-1/2"	4	
13%	1163	TROWEL ARM LEVER	4	
14%	4164	ROLL PIN 5/16 x 1-3/4"	4	
15%	1316	SPRING (RIGHT HAND)	4	
16%	1161	SPIDER PLATE ONLY	1	
17%	1322	RETAINING SCREW ASSY.	4	
18%	1456	HEX NUT 3/8-16	1	
19%	1167 A	SHSS 3/8-16 x 1-1/2" CONE POINT	1	
20%	0166 A	LOCK WASHER 3/8"	4	
21	1215	SPIDER PLATE ASSY.	1	INCLUDES ITEMS W/%
22*#	1471	THRUST COLLAR BUSHING	1	
23	10968	THRUST BEARING KIT	1	INCLUDES ITEMS W/*

HPHA36C5H TROWEL — GEARBOX & ENGINE MOUNTS ASSY.

GEARBOX & ENGINE MOUNTS



39 GEARBOX ASSEMBLY

40 GASKET/SEAL KIT

41 BEARING KIT

1 APPLY THREAD LOCK (LOCTITE 242 BLUE OR EQUIVALENT).

2 APPLY SEALANT (LOCTITE 572 OR EQUIVALENT).

3 TORQUE TO 15 LB/FT.

4 SHIM AS NECESSARY FOR 0.002 TO 0.003 INPUT SHAFT ENDPLAY.

5 SHIM AS NECESSARY FOR 0.000 TO 0.003 OUTPUT SHAFT ENDPLAY.

6 USE SPECIALLY FORMULATED WHITEMAN GEARBOX LUBRICANT P/N 10065 OR ISO 680 CYLINDER OIL.

HPHA36C5H TROWEL — GEARBOX & ENGINE MOUNTS ASSY.

GEARBOX & ENGINE MOUNTS

NO.	PART NO.	PART NAME	QTY.	REMARKS
1%*	0753	SEAL, OIL NATIONAL #470954	1	
2%	0131 A	SCREW, HHC 1/4-20 X 3/4	4	
3%	12876	FLANGE, INPUT SHAFT	1	
4%*	20395	RING, O -139 BUNA N	1	
5%*	20397	SHIM, INPUT 0.002 THICK	1	
	20398	SHIM, INPUT 0.003 THICK	1	
	20399	SHIM, INPUT 0.005 THICK	1	
	20400	SHIM, INPUT 0.010 THICK	1	
	20401	SHIM, INPUT 0.020 THICK	1	
6%#	20466	BEARING, CUP, TIMKEN #LM11910	2	
7%#	20465	BEARING, CONE, TIMKEN #LM11949	2	
8%	0627	KEY, SQUARE 3/16 X 1-1/4	1	
9%	1851	GEAR, WORM & SHAFT ASSY.	1	
10%	12874	CASE, GEAR	1	
11%	1132	VENT, AIR	1	
12	0655	SCREW, HHC 5/16-18 X 3/4	1	
13	0300 B	WASHER, FLAT 5/16 SAE	3	
14%	20476	SCREW, HHC 1/4-28 X 3/8	2	
15%	21033	SIGHT GLASS, 3/4 M PIPE STEEL	1	
16%	0121 A	FITTING, PLUG 3/8 MP SQ HEAD	1	
17%	1138	RING, SNAP, TRUARC 5100-112	1	
18%#	20475	BEARING, CUP TIMKEN #M86610	2	
19%#	20474	BEARING, CONE TIMKEN #M86647	2	
20%	1140	GEAR, WORM, BRONZE	1	
21%	20470	SHAFT, OUTPUT	1	
22%	1139	KEY, WOODRUFF #21 HARDENED	1	
23	1238	KEY, WOODRUFF #25	1	
24%*	20402	SHIM, OUTPUT 0.002 THICK	1	
	20403	SHIM, OUTPUT 0.003 THICK	1	
	20404	SHIM, OUTPUT 0.005 THICK	1	
	20405	SHIM, OUTPUT 0.010 THICK	1	
	20406	SHIM, OUTPUT 0.020 THICK	1	
25%*	20396	RING, O -257 BUNA N	1	
26%	12875	COVER, GEARBOX	1	
27	1245	BUSHING, GUARD RING	4	
28%	1146	SCREW, FHSC 5/16-18 X 1, NYLOC NP	4	
29%*	0254	SEAL, OIL, NATIONAL #470712	1	
30	1150	ARM, YOKE	1	
31	20802	RING, SNAP, TRUARC 5100-37 OR EQUIV.	2	
32	20803	SPACER, .50 OD X .40 ID X 0.25L	2	
33	20801	PIN, YOKE	1	
34	20797	STATIONARY GUARD RING	1	

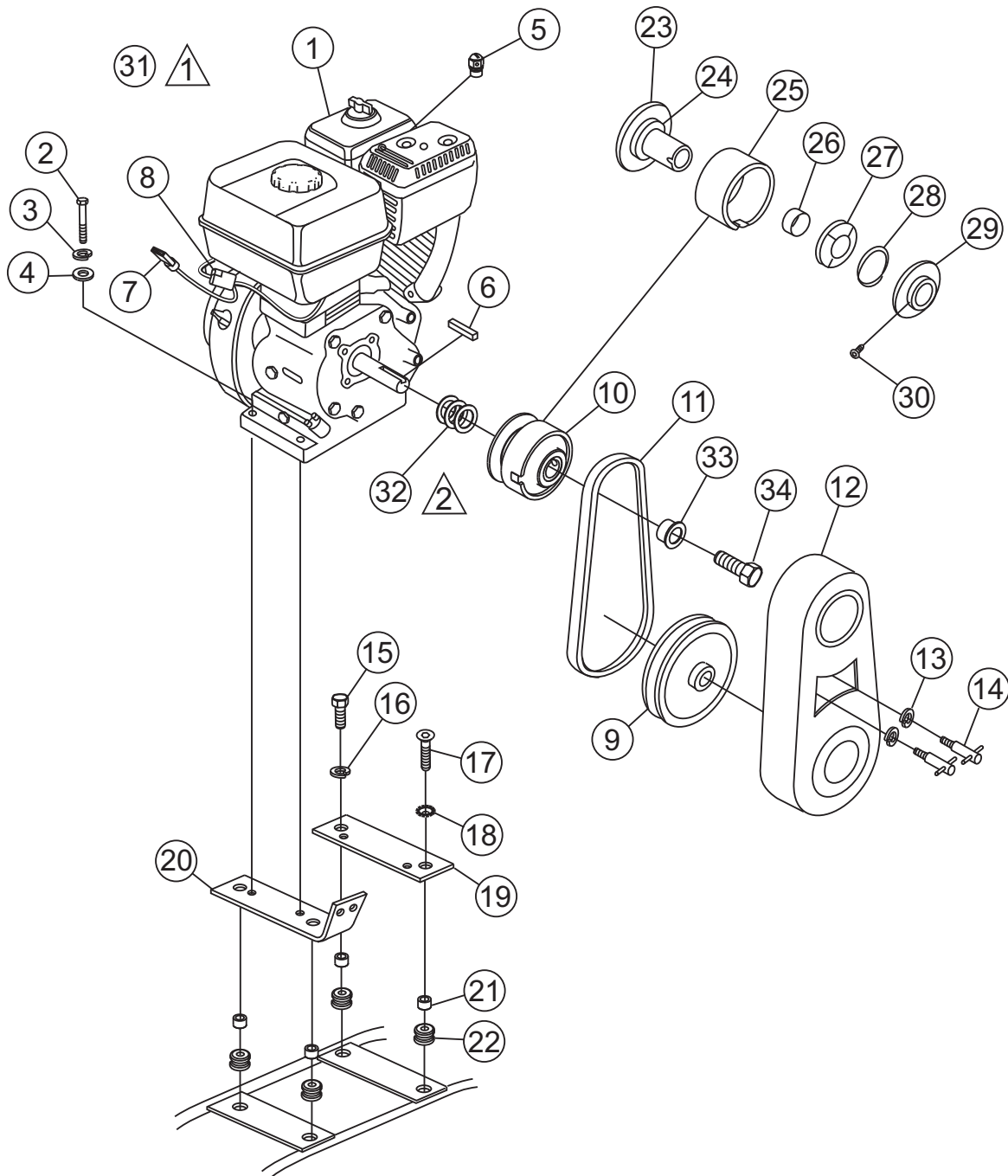
HPHA36C5HTROWEL — GEARBOX & ENGINE MOUNTS ASSY.

GEARBOX & ENGINE MOUNTS

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
36	1954	FRONT ENGINE MOUNT	1	
37	1942	REAR ENGINE MOUNT	1	
38	1247	GROMMET 1/4 X .875 ID X 1-5/8 OD	4	
40	20407	GEARBOX ASSY.	1	INCLUDES ITEMS W/%
41	21046	GASKET/SEAL KIT	1	INCLUDES ITEMS W/★
42	21047	BEARING KIT	1	INCLUDES ITEMS W/#

HPHA36C5H TROWEL — ENGINE, 5.5HP HONDA ASSY.

ENGINE, 5.5 HP HONDA



△ 1 LIFT BAIL-
CONTACT UNIT SALES DEPT./ACC. ITEM

△ 2 WITH LIFTING BAIL OPTION

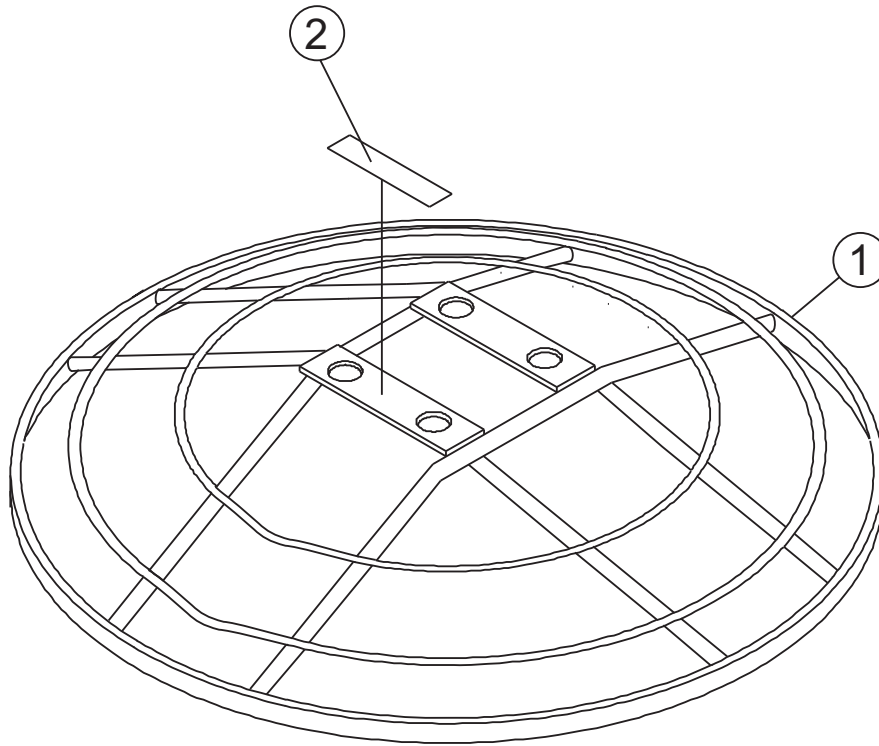
HPHA36C5H TROWEL — ENGINE, 5.5HP HONDA ASSY.

ENGINE, 5.5 HP HONDA

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	1386	ENGINE 5.5HP HONDA	1	GX160K1QX2
2	1391	HHCS 5/16-24 x 1-1/2"	4	
3	0161 C	LOCK WASHER 5/16"	4	
4	0300 B	FLAT WASHER 5/16"	4	
5	20845	SWIVEL, THROTTLE CABLE	1	
6	0310	SQUARE KEY 1/4X1/4X1.1/2"	1	
7	1488	WIRE, SAFETY SWITCH	1	
8	1475	CONNECTOR, SPLICE TAP	1	
9	0740	PULLEY, AK-51 X 3/4	1	HPHA36C5H
10	0255	AUTOMATIC CLUTCH ASSY. 3/4"BORE	1	INCLS. ALL ITEMS W/*
11	1390	BELT, A26 GATES HPII ONLY	1	HPHA36C5H
12	D6005	BELT GUARD	1	
13	0181 B	LOCK WASHER 1/4"	2	
14	2577	T-BOLT 1/4-20	2	
15	1284	SCREW, HHC 3/8 - 16 X 1-1/2	2	
16	0166 A	WASHER, LOCK 3/8 MED	2	
17	20982	SCREW, FSCS 3/8 - 16 X 1-1/2	2	
18	1480	WASHER, CS EXT. SHKP 3/8	2	
19	1942	PLATE, REAR 5.5HP HONDA	1	
20	1954	PLATE, FRONT, 5.5HP HONDA	1	
21	1245	BUSHING, GUARD RING	4	
22	1247	GROMMET, 1/4 X 7/8ID X 1-5/8OD	4	
23*	21307	SPINDLE, CLUTCH 3/4" BORE	1	
24*	0456	BEARING, SHIELDED	1	
25*	0251	CLUTCH HOUSING DRUM	1	
26*	0458	BUSHING, CLUTCH HSING DRM	1	
27*	B1766	WEIGHT, CLUTCH	4	
28*	0855	SPRING	1	
29*	0253	PLATE, CLUTCH EXPANSION	1	
30*	1868	SCREW, SHS 3/8-24X3/4 NOPLT	1 ...	REPLACES P/N 0457
313		LIFT BAIL	1 ...	NOT SHOWN
				CONTACT UNIT SALES DEPT./ACC. ITEM
32	0939	SPACER	3 ...	LIFTING BALE OPTION
33	1406	PLUG, END (CLUTCH)	1	
34	1403	SCREW, FHSC 5/16 - 24 x 1-1/4 PLTD	1	

HPHA36C5HTROWEL — GUARD RING ASSY.

GUARD RING ASSY.



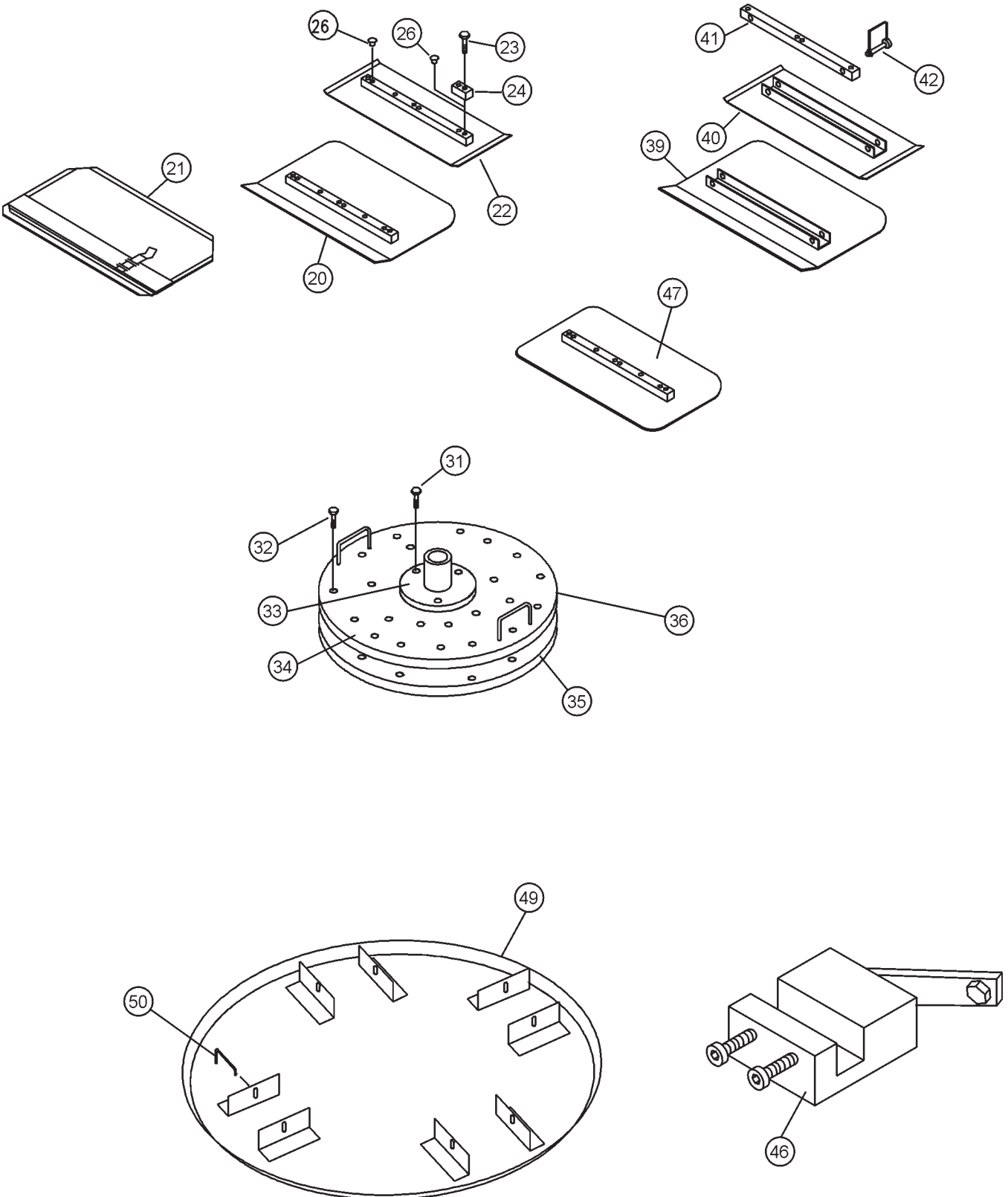
HPHA36C5H TROWEL — GUARD RING ASSY.

GUARD RING ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	20808	GUARD RING ASSEMBLY	1	
2	1215	SPIDER PLATE ASSY.	1	

HPHA36C5HTROWEL — BLADES & ARM ADJ. FIXTURE ASSY.

BLADES & ARM ADJ. FIXTURE ASSY.



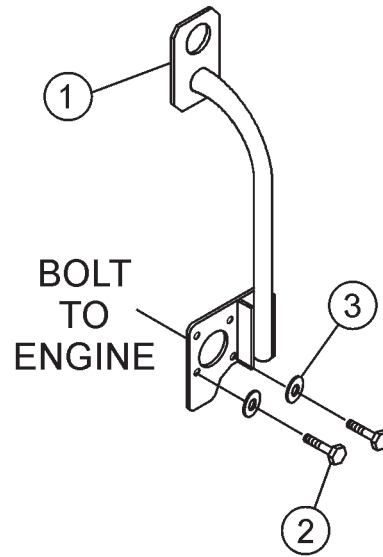
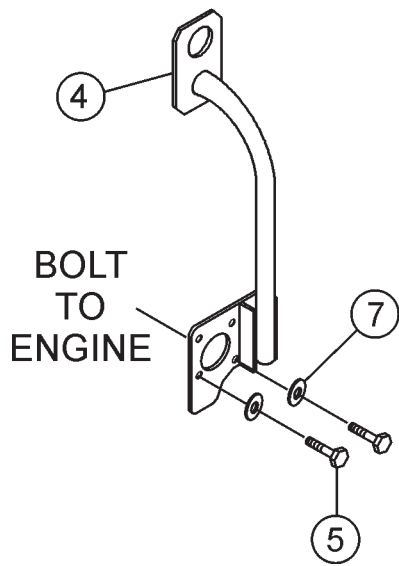
HPHA36C5H TROWEL — BLADES & ARM ADJ. FIXTURE ASSY.

BLADES & ARM ADJ. FIXTURE ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
20		COMBO FLOAT & FINISH BLADE	4	CONTACT UNIT SALES DEPT./ACC. ITEM
20		ENDURO COMBO FLOAT & FINISH BLADE .	4	CONTACT UNIT SALES DEPT./ACC. ITEM
21		FLOAT BLADE	4	CONTACT UNIT SALES DEPT./ACC. ITEM
22		FINISH BLADE	4	CONTACT UNIT SALES DEPT./ACC. ITEM
22		ENDURO FINISH BLADE W/ROTATING	4	CONTACT UNIT SALES DEPT./ACC. ITEM
23	0202	HHCS 5/16-18X1" RING	4	
24	0201	GUARD RING LUG RING	4	
26	1434	TROWEL LUG (FINISH BLADE ONLY)	4	
27	1162 A	LUBRA-CAP	4	
28	7281	STABILIZER RING 14 1/2" ARM	1	
29	6014 C	HEX NUT 5/16-24	8	
30	1237	HHCS 5/16-18X7/8" NY-LOC	4	
31	0490	SHCS 7/16-14X1"	3	
32	0487	SHCS 3/8-16X1/2"	20	
33	0489	GRINDING DISC HUB	1	
34	0488	STONE MOUNT PLATE	1	
35		GRINDING DISC STONE ONLY	1	CONTACT UNIT SALES DEPT./ACC. ITEM
36		GRINDING DISC ASSY.	1	CONTACT UNIT SALES DEPT./ACC. ITEM
39		UNIVERSAL COMBO BLADE	4	CONTACT UNIT SALES DEPT./ACC. ITEM
39		ENDURO UNIVERSAL COMBO BLADE	4	CONTACT UNIT SALES DEPT./ACC. ITEM
40		UNIVERSAL FINISH BLADE	4	CONTACT UNIT SALES DEPT./ACC. ITEM
40		ENDURO UNIVERSAL FINISH BLADE	4	CONTACT UNIT SALES DEPT./ACC. ITEM
41		UNIVERSAL MOUNTING BAR	4	CONTACT UNIT SALES DEPT./ACC. ITEM
42		SNAP PIN 1/4"X1.3/4"	8	CONTACT UNIT SALES DEPT./ACC. ITEM
44	0166 A	LOCK WASHER 3/8"	4	
46		TROWEL ARM ADJ. FIXTURE ASSY.	1	CONTACT UNIT SALES DEPT./ACC. ITEM
47		REVERSIBLE COMBO BLADE	4	CONTACT UNIT SALES DEPT./ACC. ITEM
48	1723	MALE R.H. ROD END 5/16"	1	
49		FLOAT DISC	1	CONTACT UNIT SALES DEPT./ACC. ITEM
50		FLOAT DISC LATCH PIN	4	CONTACT UNIT SALES DEPT./ACC. ITEM

HPHA36C5HTROWEL — LIFTING BAIL ASSY. (OPTION)

LIFTING BAIL ASSY. (OPTION)



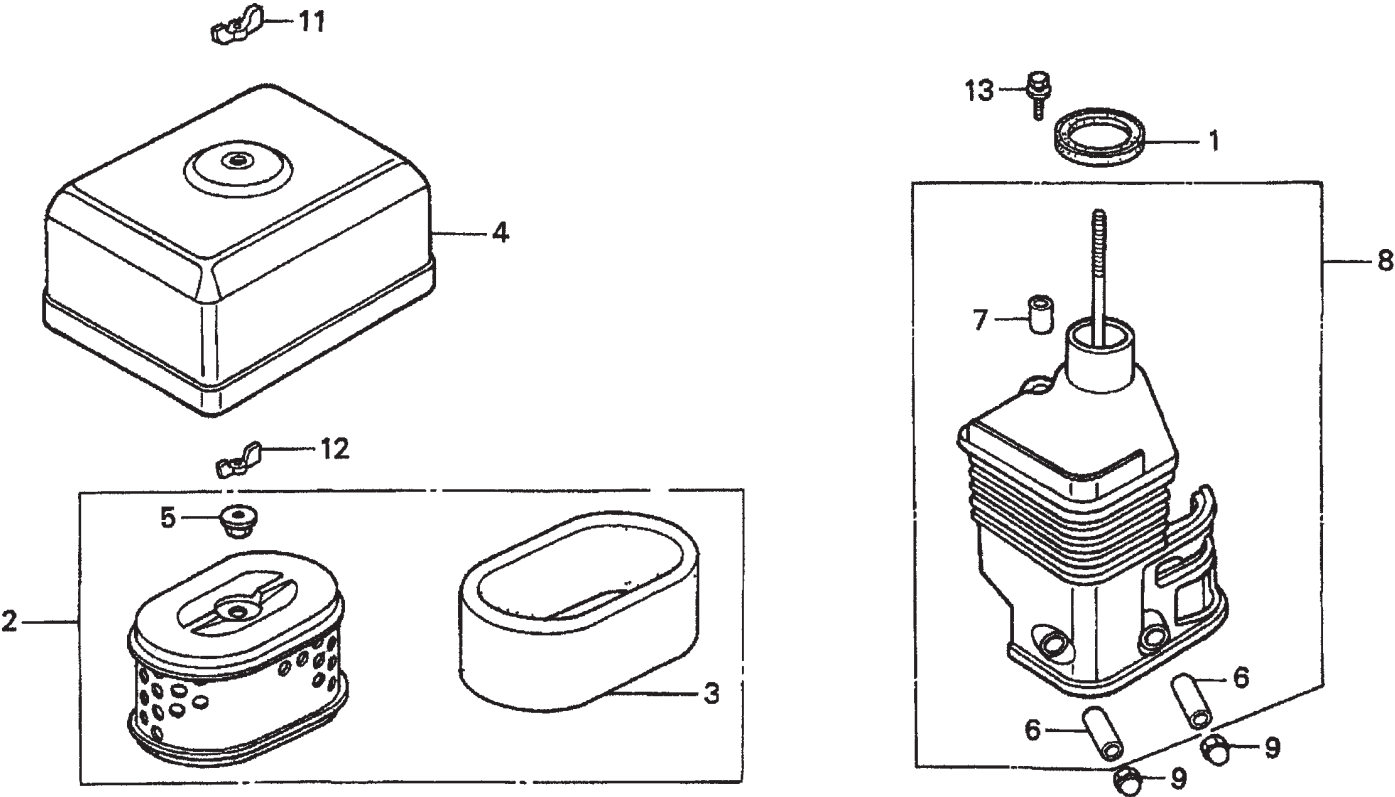
HPHA36C5H TROWEL — LIFTING BAIL ASSY. (OPTION)

LIFTING BAIL ASSY. (OPTION)

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1		LIFTING BAIL ASSY.	1	CONTACT UNIT SALES DEPT./ACC. ITEM
2	10229	HHCS 5/16-24X1"	4	
3	0161 C	LOCK WASHER 5/16"	4	
4		LIFTING BAIL ASSY.	1	CONTACT UNIT SALES DEPT./ACC. ITEM
5	0205	HHCS 3/8-16X1"	3	
6	1394	FHSCS 3/8-16X1"	1	
7	0166 A	LOCK WASHER 3/8"	3	

HONDA GX160K1QX2 — AIR CLEANER ASSY.

AIR CLEANER ASSY.



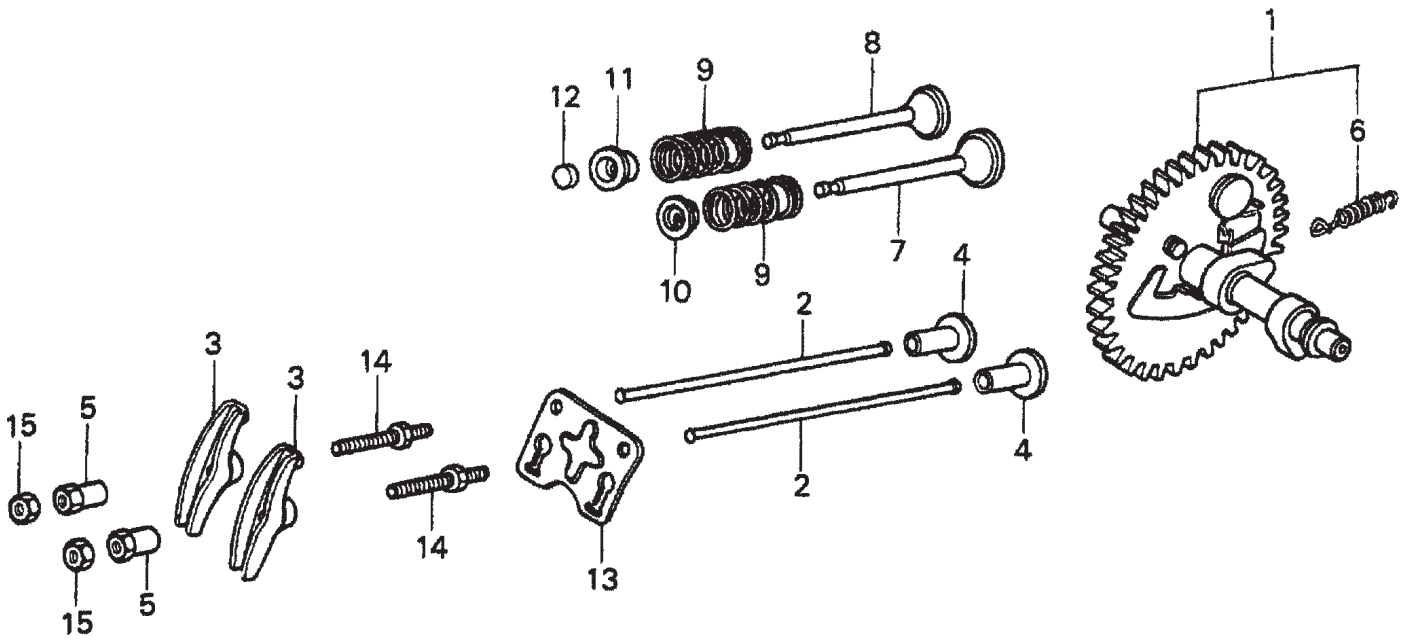
HONDA GX160K1QX2 — AIR CLEANER ASSY.

AIR CLEANER ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	16271ZE1000	GASKET, ELBOW	1	
2	17210ZE1517	ELEMENT, AIR CLEANER (DUAL)	1	INCLUDES ITEMS W/*
3*	17218ZE1505	FILTER, OUTER	1	
4	17230ZE1820	COVER, AIR CLEANER (DUAL)	1	
5*	17232891000	GROMMET, AIR CLEANER	1	
6#	17238ZE7010	COLLAR, AIR CLEANER	2	
7#	17239ZE1000	COLLAR B, AIR CLEANER	1	
8	17410ZE1020	ELBOW, AIR CLEANER	1	INCLUDES ITEMS W/#
9	9405006000	NUT, CAP 6MM	2	
11	90325044000	WINGNUT, TOOL BOX SETTING	1	
12	90325044000	WINGNUT, TOOL BOX SETTING	1	
13	957010602000	BOLT, FLANGE 6 X 20	1	

HONDA GX160K1QX2 — CAMSHAFT ASSY.

CAMSHAFT ASSY.



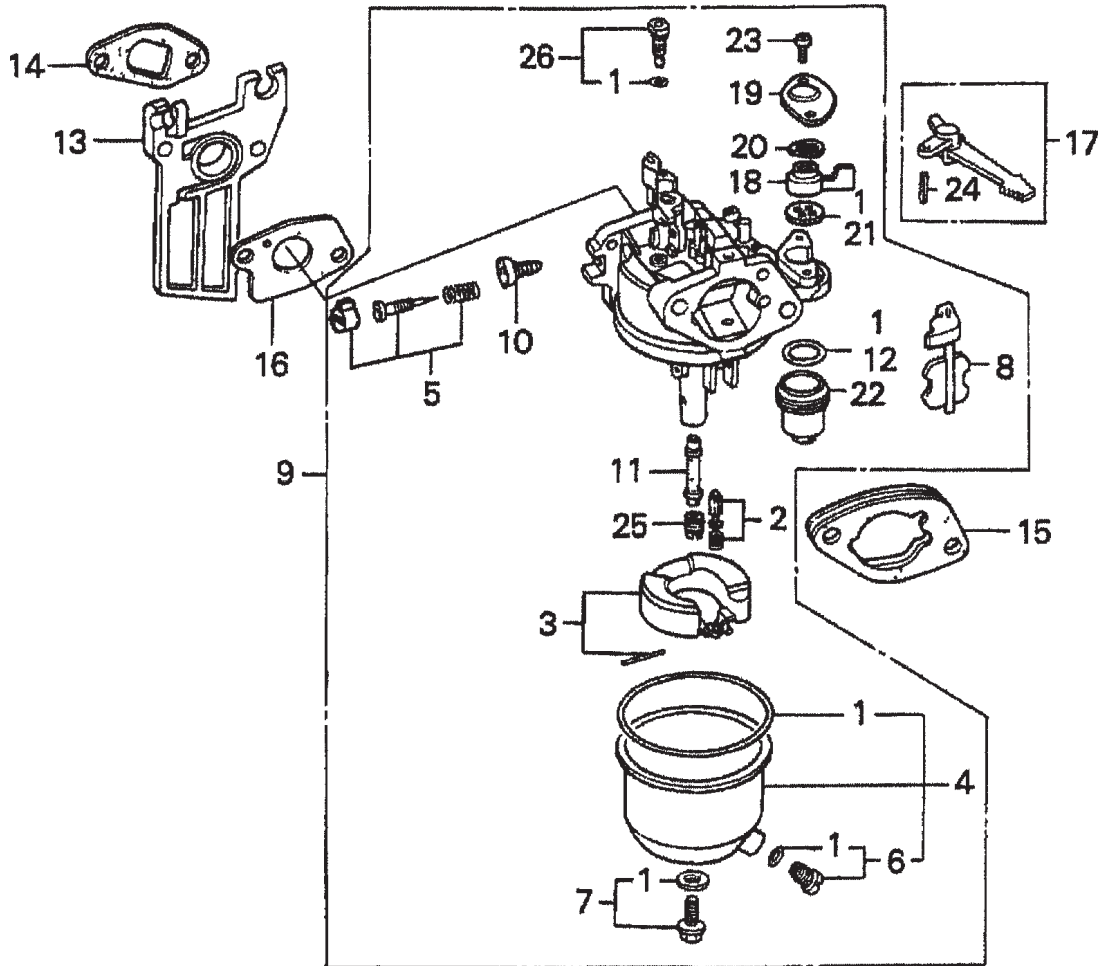
HONDA GX160K1QX2 — CAMSHAFT ASSY.

CAMSHAFT ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	14100ZE1812	CAMSHAFT ASSEMBLY	1	INCLUDES ITEMS W/*
2	14410ZE1010	ROD, PUSH	2	
3	14431ZE1000	ARM, VALVE ROCKER	2	
4	14441ZE1010	LIFTER, VALVE	2	
5	14451ZE1013	PIVOT, ROCKER ARM	2	
6	14568ZE1000	SPRING, WEIGHT RETURN	1	
7	14711ZF1000	VALVE, INTAKE	1	
8	14721ZF1000	VALVE, EXHAUST	1	
9	14751ZF1000	SPRING VALVE	2	
10	14771ZE1000	RETAINER, INTAKE VALVE SPRING	1	
11	14773ZE1000	RETAINER, EXHAUST VALVE SPRING	1	
12	14781ZE1000	ROTATOR, VALVE	1	
13	14791ZE1010	PLATE, PUSH ROD GUIDE	1	
14	90012ZE0010	BOLT, PIVOT 8MM	2	
15	90206ZE1000	NUT, PIVOT ADJ.	2	

HONDA GX160K1QX2 — CARBURETOR ASSY.

CARBURETOR ASSY.



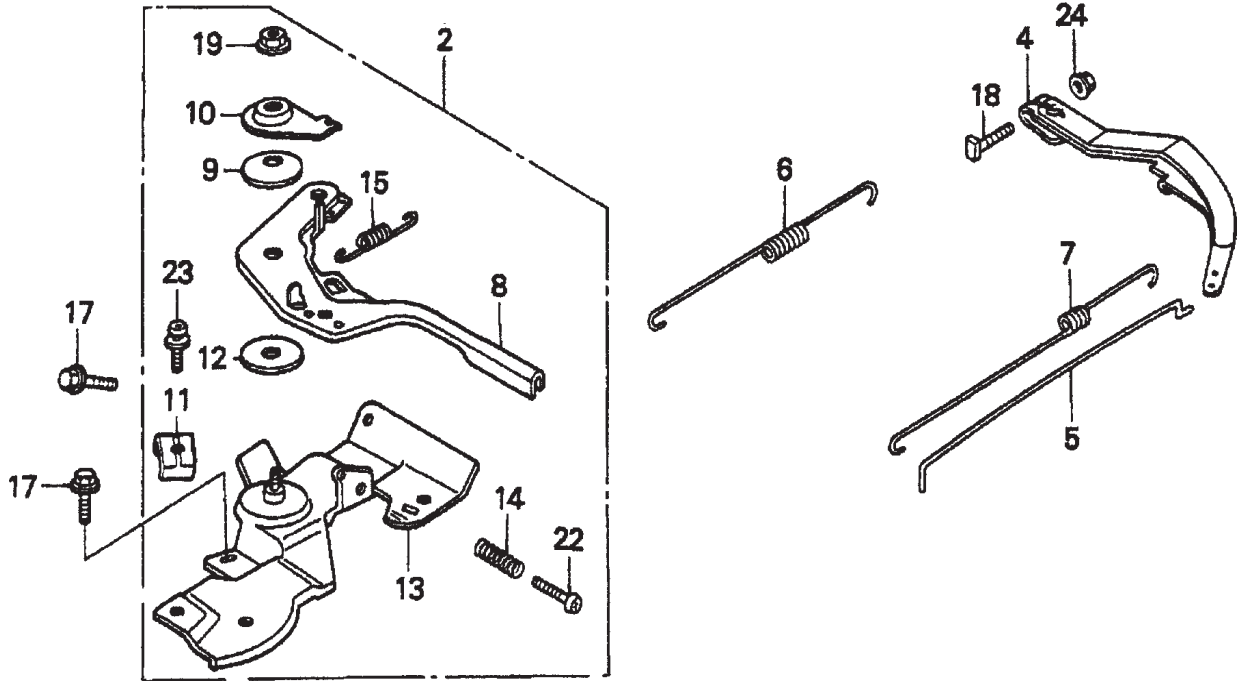
HONDA GX160K1QX2 — CARBURETOR ASSY.

CARBURETOR ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1*#+%■	16010ZE1812	GASKET SET	1	
2*	16011ZE0005	VALVE SET, FLOAT	1	
3	16013ZE0005	FLOAT SET	1	
4*	16015ZE0831	CHAMBER SET, FLOAT	1	INCLUDES ITEMS/#
5*	16016ZH7W01	SCREW SET	1	
6*#	16024ZE1811	SCREW SET, DRAIN	1	INCLUDES ITEM W/+
7*	16028ZE0005	SCREW SET B	1	INCLUDES ITEM W/%
8*	16044ZE0005	CHOKE SET	1	
9	16100ZH8W51	CARBURETOR ASSEMBLY, BE65B B	1	INCLUDES ITEMS/*
10*	16124ZE0005	SCREW, THROTTLE STOP	1	
11*	16166ZH8W50	NOZZLE, MAIN	1	
12*	16173001004	O- RING	1	
13	16211ZE1000	INSULATOR, CARBURETOR	1	
14	16212ZH8800	GASKET, INSULATOR	1	
15	16220ZE1020	SPACER, CARBURETOR	1	
16	16221ZH8801	GASKET, CARBURETOR	1	
17	16610ZE1000	LEVER, CHOKE STANDARD	1	INCLUDES ITEM W/\$
18*	16953ZE1812	LEVER, VALVE	1	
19	16954ZE1812	PLATE, LEVER SETTING	1	
20*	16956ZE1811	SPRING, VALVE LEVER	1	
21*	16957ZE1812	GASKET, VALVE	1	
22*	16967ZE0811	CUP, FUEL STRAINER	1	
23*	93500030060H	SCREW, PAN 3 X 6	2	
24\$	9430520122	PIN, SPRING 2 X 12	1	
25*	99101ZH80650	JET, MAIN #65 (OPTIONAL)	1	
25*	99101ZH80680	JET, MAIN #68 (OPTIONAL)	1	
26*	99204ZE00350	JET SET, PILOT #35	1	INCLUDES ITEM W/■

HONDA GX160K1QX2 — CONTROL ASSY.

CONTROL ASSY.



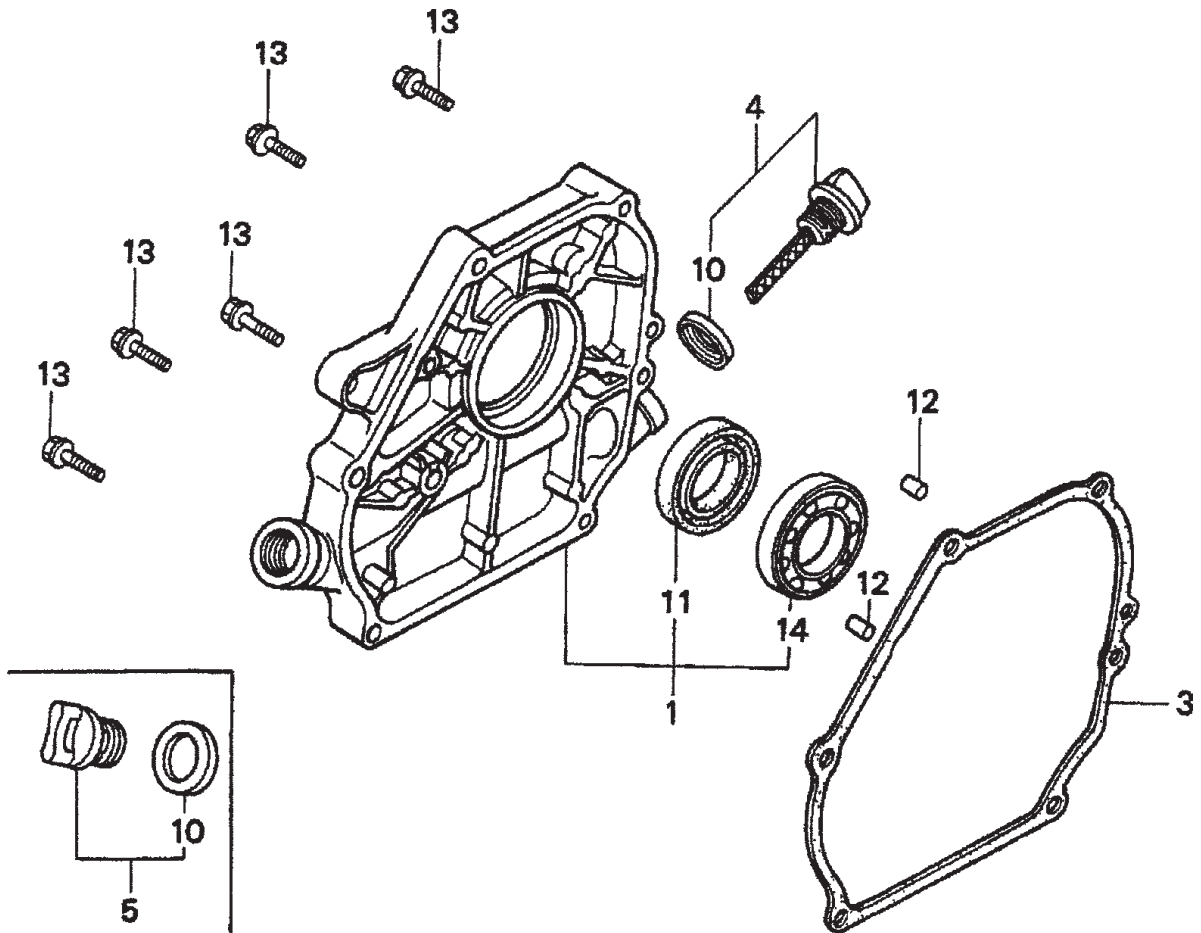
HONDA GX160K1QX2 — CONTROL ASSY.

CONTROL ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
2	16500ZH8823	CONTROL ASSEMBLY, REMOTE	1	INCLUDES ITEMS W/*
4	16551ZE0010	ARM, GOVERNOR	1	
5	16555ZE1000	ROD, GOVERNOR	1	
6	16561ZE1020	SPRING GOVERNOR	1	
7	16562ZE1020	SPRING, THROTTLE RETURN	1	
8*	16571ZH8020	LEVER, CONTROL	1	
9*	16574ZE1000	SPRING, LEVR	1	
10*	16575ZH8000	WASHER, CONTROL LEVER	1	
11*	16576891000	HOLDER, CABLE	1	
12*	16578ZE1000	SPACER, CONTROL LEVER	1	
13*	16580ZH8812	BASE, CONTROL (REMOTE)	1	
14*	16584883300	SPRING, CONTROL ADJUSTING	1	
15*	16592ZE1810	SPRING, CABLE RETURN	1	
17	90013883000	BOLT, FLANGE 6 X 12 (CT200)	2	
18	90016ZE5010	BOLT, GOVERNOR ARM	1	
19*	90114SA0000	NUT, SELF- LOCK 6MM	1	
22*	93500050250H	SCREW, PAN 5 X 25	1	
23*	938930501600	SCREW, WASHER 5 X 16	1	
24	9405006000	NUT, FLANGE 6MM	1	

HONDA GX160K1QX2 — CRANKCASE COVER ASSY.

CRANKCASE COVER ASSY.



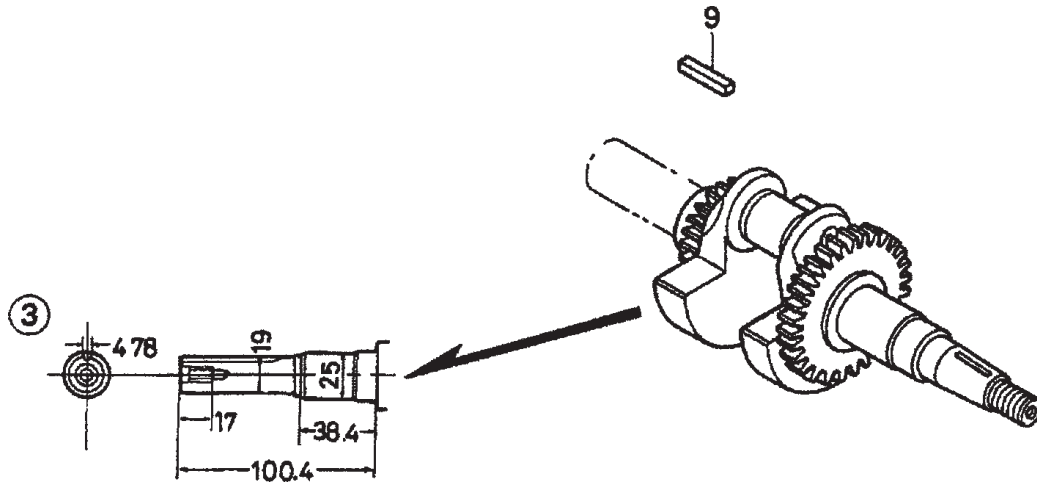
HONDA GX160K1QX2 — CRANKCASE COVER ASSY.

CRANKCASE COVER ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	11300ZE1641	COVER ASSEMBLY, CRANKCASE (U- TYPE)	1	INCLUDES ITEMS W/*
3	11381ZH8801	GASKET, CASE COVER (NON- ASBESTOS)	1	
4	15600ZE1003	CAP ASSEMBLY, OIL FILLER	1	INCLUDES ITEMS W/#
5	15600ZG4003	CAP ASSEMBLY, OIL FILLER	1	INCLUDES ITEMS W/%
10%#	15625ZE1003	GASKET, OIL FILLER CAP	1	
11*	91202883005	OIL SEAL 25 X 41 X 6	1	
12	9430108140	PIN A, DOWEL 8 X 14	2	
13	957010803200	BOLT, FLANGE 8 X 32	6	
14*	961006205010	BEARING, RADIAL BALL 6205	1	

HONDA GX160K1QX2 — CRANKSHAFT ASSY.

CRANKSHAFT ASSY.



HONDA GX160K1QX2 — CRANKSHAFT ASSY.

CRANKSHAFT ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
3	13310ZE1622	CRANKSHAFT, Q- TYPE	1	
9	501019	KEY, 3/16" x 45 MM	1	

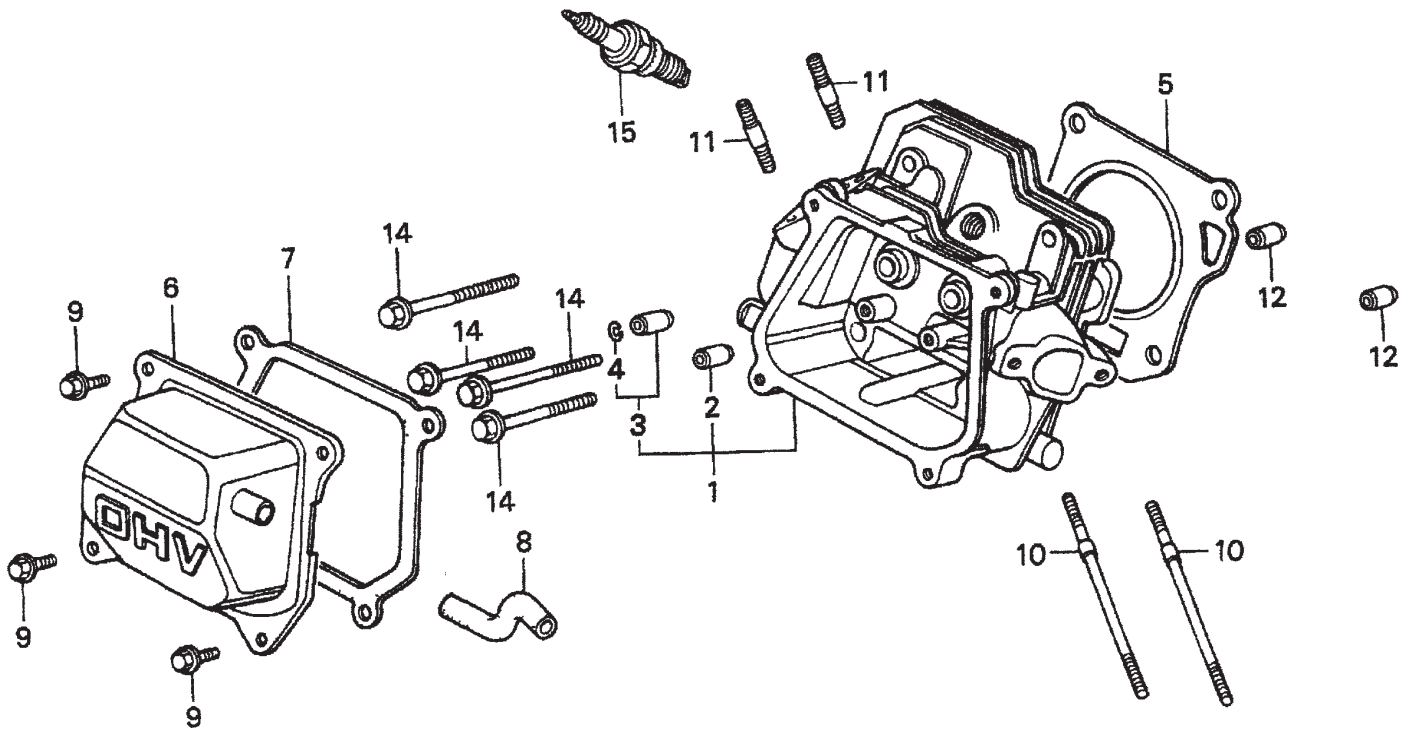
HONDA GX160K1QX2 — CYLINDER BARREL ASSY.

CYLINDER BARREL ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
2	12000ZH8811	CYLINDER ASSEMBLY, OIL ALERT	1	INCLUDES ITEMS W/*
3	15510ze1033	SWITCH ASSEMBLY, OIL LEVEL		
4	16510ZE1000	GOVERNOR ASSEMBLY	1	INCLUDES ITEMS W/#
5#	16511ZE1000	WEIGHT, GOVERNOR	2	
6#	16512ZE1000	HOLDER, GOVERNOR WEIGHT	1	
8	16531ZE1000	SLIDER, GOVERNOR	1	
9	16541ZE1000	SHAFT, GOVERNOR ARM	1	
10	90131ZE1000	BOLT, DRAIN PLUG	2	
11	80451ZE1000	WASHER, THRUST 6MM	1	
12	90601ZE1000	WASHER, DRAIN PLUG 10.2MM	2	
13	90602ZE1000	CLIP, GOVERNOR HOLDER	1	
14*	91001ZF1003	BEARING, RADIAL BALL 6205	1	
15*	91202883005	OIL SEAL 25 X 41 X 6	1	
16	91353671003	O- RING 13.5 X 1.5 (ARAI)	1	
17	9405010000	NUT, FLANGE 10MM	1	
18	58176	WASHER, PLAIN 6MM	2	
19	9425108000	PIN, LOCK 8MM	1	
20	957010601200	BOLT, FLANGE 6 X 12	2	

HONDA GX160K1QX2 — CYLINDER HEAD ASSY.

CYLINDER HEAD ASSY.



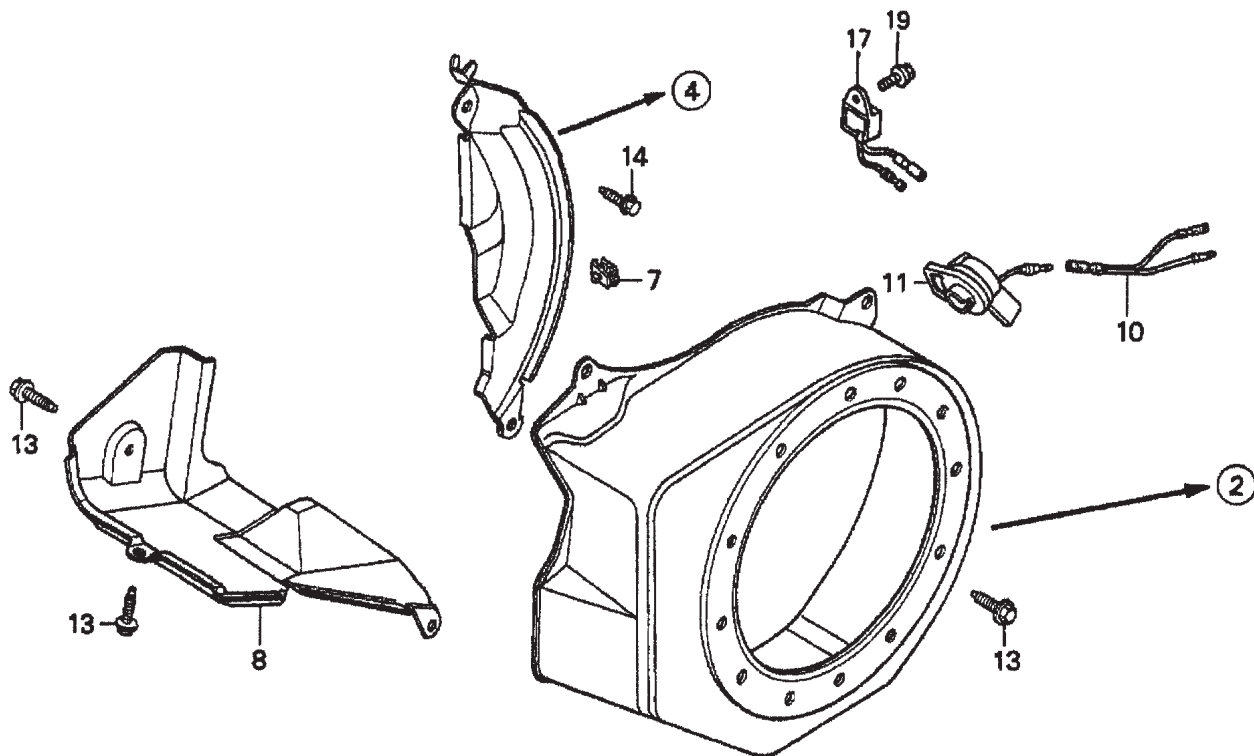
HONDA GX160K1QX2 — CYLINDER HEAD ASSY.

CYLINDER HEAD ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	12210ZH8000	CYLINDER HEAD	1	INCLUDES ITEMS W/*
2*	12204ZE1306	GUIDE, VALVE OS (OPTIONAL	1	
3*	12205ZE1315	GUIDE, EXHAUST VALVE OS (OPTIONAL)	1	INCLUDES ITEM W/%
4%*	12216ZE5300	CLIP, VALVE GUIDE	1	
5	12251ZF1800	GASKET, CYLINDER HEAD	1	
6	12310ZE1020	COVER, HEAD	1	
7	12391ZE1000	GASKET, CYLINDER HEAD COVER	1	
8	15721ZH8000	TUBE, BREATHER	1	
9	90016ZE1000	BOLT, FLANGE 6 X13	4	
10	90043ZE1020	BOLT, STUD 6 X109	2	
11	90047ZE1000	BOLT, STUD 8 X 32	2	
12	9430110160	PIN A, DOWEL 10 X16	2	
14	957230806000	BOLT, FLANGE 8 X60	4	
15	9807956846	SPARK PLUG BPR6ES (NGK)	1	

HONDA GX160K1QX2 — FAN COVER ASSY.

FAN COVER ASSY.



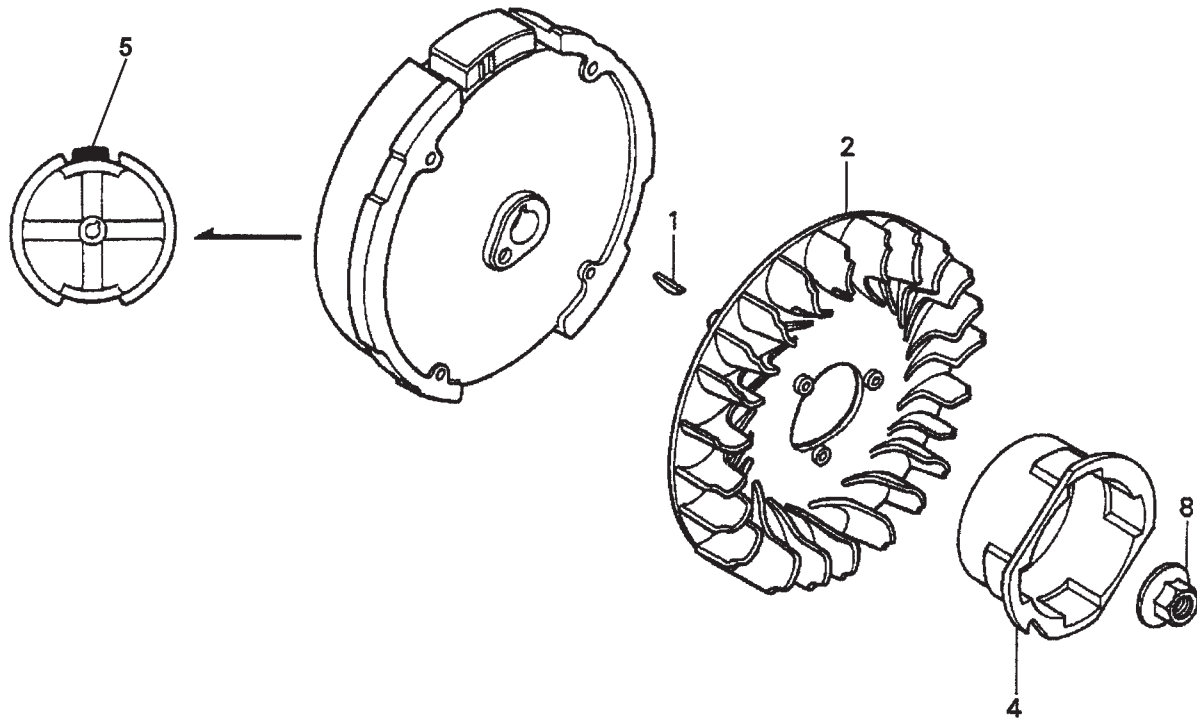
HONDA GX160K1QX2 — FAN COVER ASSY.

FAN COVER ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
2	19610ZE1000ZC	COVER, FAN "NH1" (BLACK)	1	
4	19611ZH8810	PLATE, SIDE (OIL ALERT)	1	
7	90601ZH7013	CLIP, HARNESS	1	
8	19630ZH8000	SHROUD	1	
10	32197ZH8003	SUB- HARNESS	1	
11	36100ZE1015	SWITCH ASSEMBLY, ENGINE STOP	1	
13	90013883000	BOLT, FLANGE 6 X12 (CT200)	6	
14	90022888010	BOLT, FLANGE 6 X20 (CT200)	1	
17	34150ZH7003	ALERT UNIT, OIL	1	
19	957010600800	BOLT, FLANGE 6 X8	1	

HONDA GX160K1QX2 — FLYWHEEL ASSY.

FLYWHEEL ASSY.



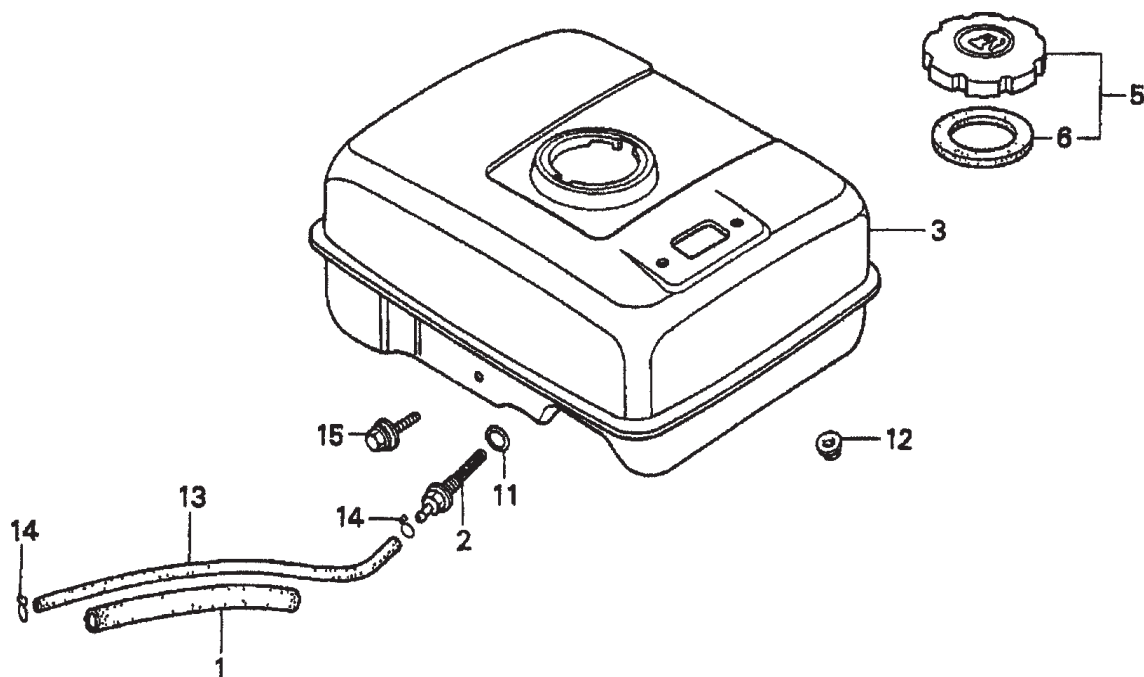
HONDA GX160K1QX2 — FLYWHEEL ASSY.

FLYWHEEL ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	13331357000	KEY, SPECIAL WOODRUFF (25 X18)	1	
2	19511ZE1000	FAN, COOLING	1	
4	28451ZH8003	PULLEY, STARTER	1	
5	31100ZE1010	FLYWHEEL	1	
5	31100ZE1810	FLYWHEEL, LAMP	1	
8	90201878003	NUT, SPECIAL 14MM	1	

HONDA GX160K1QX2 — FUEL TANK ASSY.

FUEL TANK ASSY.



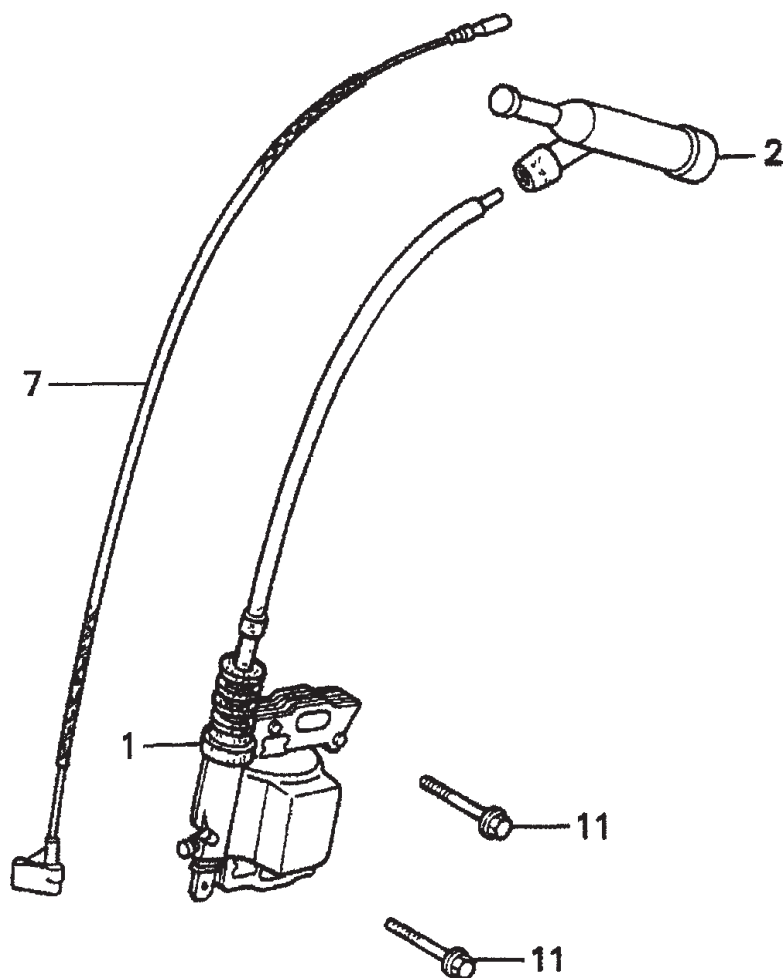
HONDA GX160K1QX2 — FUEL TANK ASSY.

FUEL TANK ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	16854ZH8000	RUBBER, SUPPORTER 107MM	1	
2	16955ZE1000	JOINT, FUEL TANK	1	
3	17510ZE1020ZF	TANK, FUEL *NH1* (BLACK)	1	
5	17620ZH7023	CAP, FUEL FILLER	1	INCLUDES ITEM W/*
6*	17631ZH7003	GASKET, FUEL FILLER CAP	1	
11	91353671003	O- RING 13.5 X1.5 (ARAI)	1	
12	9405006000	NUT, FLANGE 6MM	2	
13	950014500360M	BULK HOSE, FUEL 4.5 X 3000 (4.5 X 140)	1	
14	9500202080	CLIP, TUBE B8	2	
15	957010602500	BOLT, FLANGE 6 X 25	1	

HONDA GX160K1QX2 — IGNITION COIL ASSY.

IGNITION COIL ASSY.



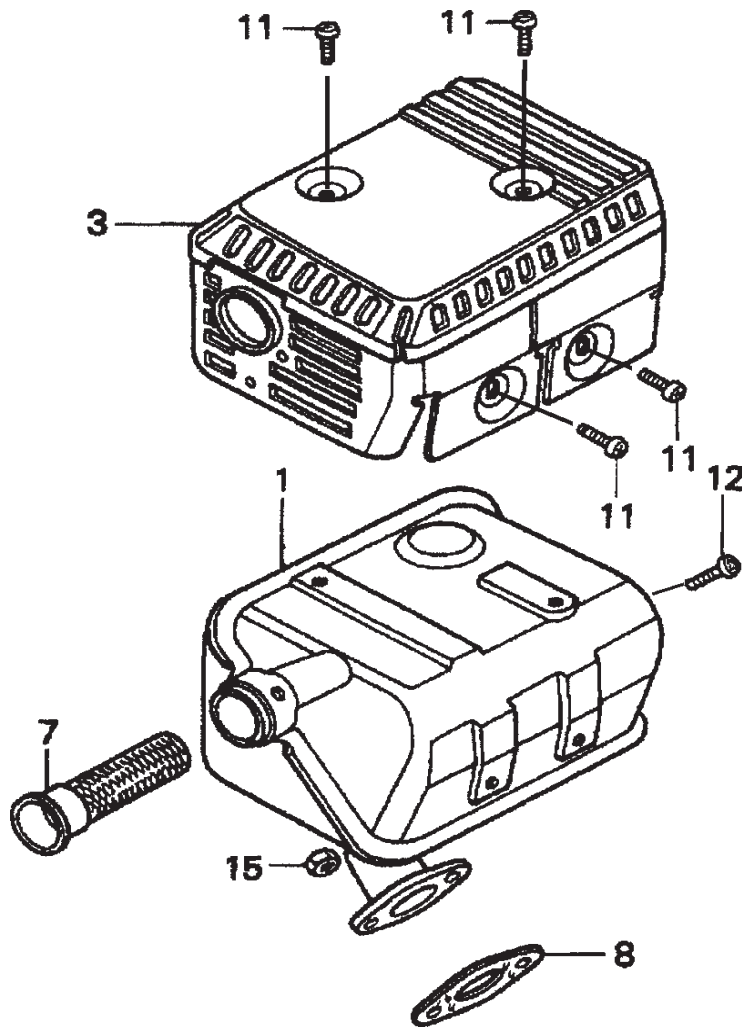
HONDA GX160K1QX2 — IGNITION COIL ASSY.

IGNITION COIL ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	30500ZE1043	COIL ASSEMBLY, IGNITION	1	
2	30700ZE1013	CAP ASSEMBLY, NOISE SUPPRESSOR	1	
7	36101ZE1010	WIRE, STOP SWITCH 370MM	1	
11	957010602500	BOLT, FLANGE 6 X25	2	

HONDA GX160K1QX2 — MUFFLER ASSY.

MUFFLER ASSY.



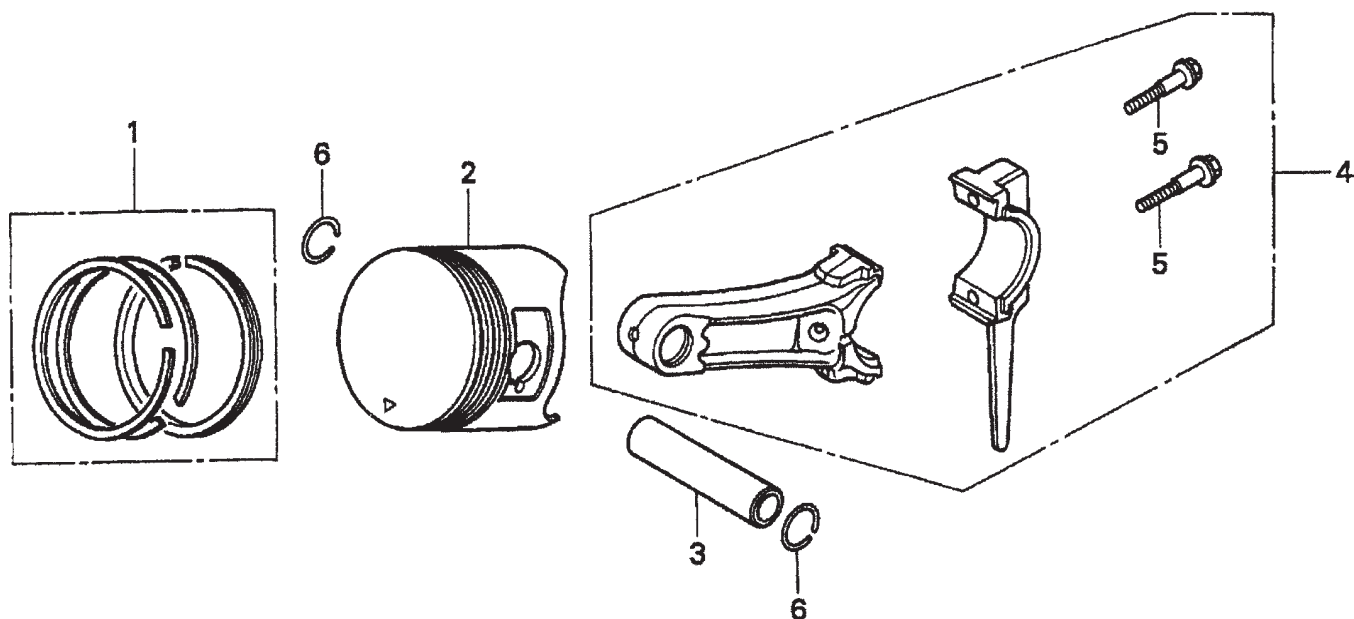
HONDA GX160K1QX2 — MUFFLER ASSY.

MUFFLER ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	18310ZF1000	MUFFLER	1	
1	18310ZH8810	MUFFLER (OPTIONAL)	1	
3	18320ZF1H01	PROTECTOR, MUFFLER	1	
7	18355ZE1000	ARRESTER, SPARK (OPTIONAL)	1	
8	18381ZH8800	GASKET, MUFFLER	1	
11	90050ZE1000	SCREW, TAPPING 5 X 8 (OPTIONAL)	4	
12	90055ZE1000	SCREW, TAPPING 4 X 6 (OPTIONAL)	1	
15	02010860	NUT, HEX. 8MM	2	

HONDA GX160K1QX2 — PISTON ASSY.

PISTON ASSY.



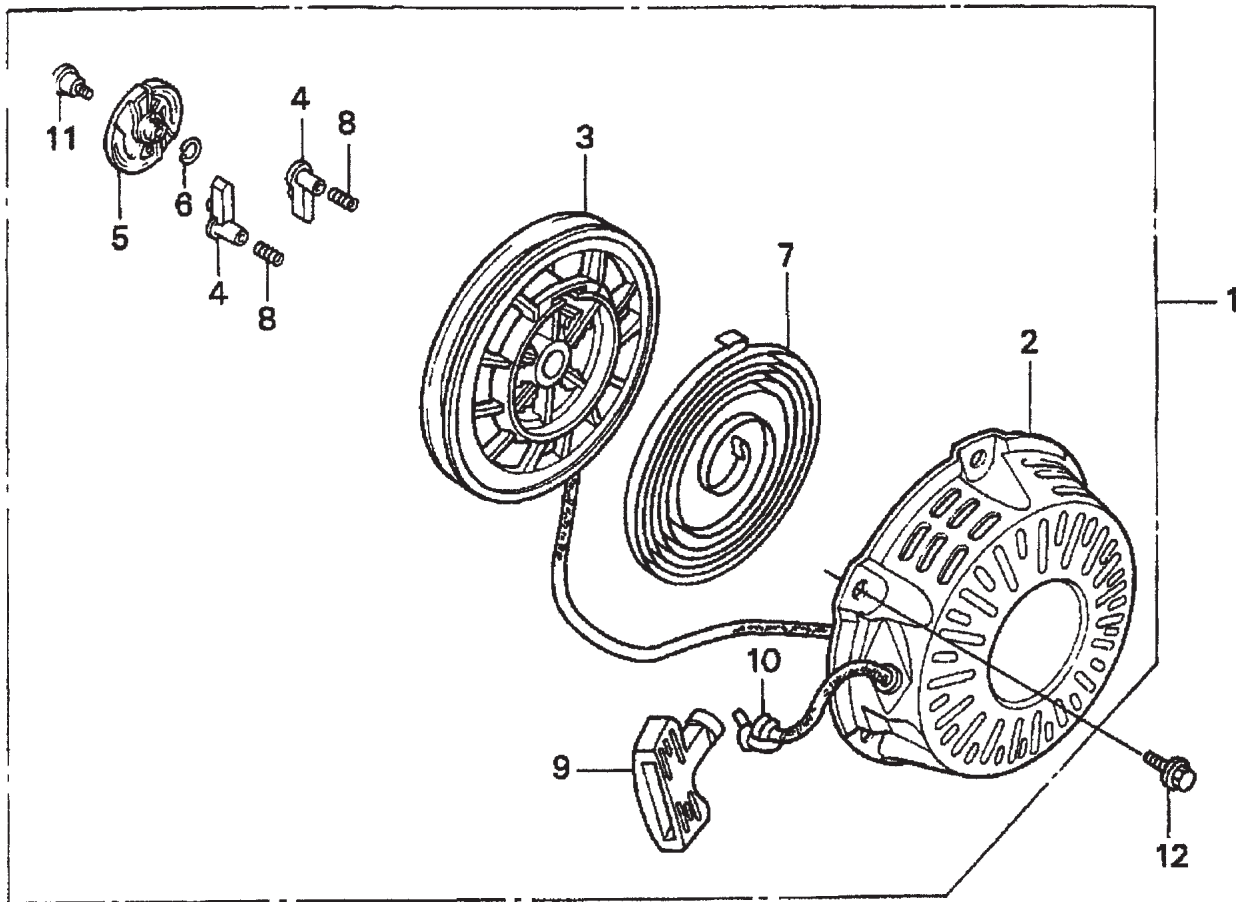
HONDA GX160K1QX2 — PISTON ASSY.

PISTON ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	13010ZH8941	RING SET, PISTON (STANDARD)	1	
1	13011ZH8941	RING SET, PISTON (OS 0.25), OPTIONAL	1	
1	13012ZH8941	RING SET, PISTON (OS 0.50), OPTIONAL	1	
1	13013ZH8941	RING SET, PISTON (0.75), OPTIONAL	1	
2	13101ZH8010	PISTON (STANDARD)	1	
2	13102ZH8000	PISTON (OS 0.25), OPTIONAL	1	
2	13101ZH8010	PISTON (OS 0.50), OPTIONAL	1	
2	13104ZH8000	PISTON (0.75), OPTIONAL	1	
3	13111ZE1000	PIN, PISTON	1	
4	132A0ZE1000	ROD ASSY., CONNECTING (US 0.25), OPT.	1	
4	13200ZE1010	ROD ASSEMBLY, CONNECTING	1	
5	90001ZE1000	BOLT, CONNECTING ROD	2	
6	90551ZE1000	CLIP, PISTON PIN 18MM	2	

HONDA GX160K1QX2 — RECOIL STARTER ASSY.

RECOIL STARTER ASSY.



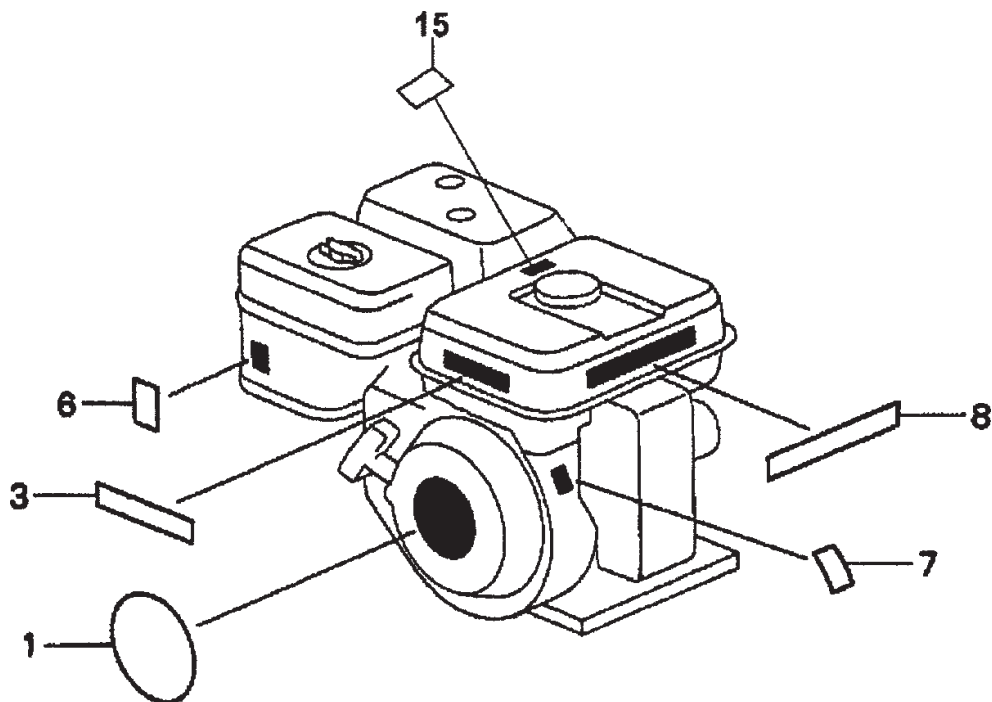
HONDA GX160K1QX2 — RECOIL STARTER ASSY.

RECOIL STARTER ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	28400ZH8013ZB	STARTER ASSY., RECOIL "NH1" BLACK	1	INCLUDES ITEM W/*
2*	28410ZH8003ZB	CASE, RECOIL STARTER "NH1" BLACK	1	
3*	28420ZH8013	REEL, RECOIL STARTER	1	
4*	28422ZH8013	RATCHET, STARTER	2	
5*	28433ZH8003	GUIDE, RATCHET	1	
6*	28441ZH8003	SPRING, FRICTION	1	
7*	28442ZH8003	SPRING, RECOIL STARTER	1	
8*	28443ZH8003	SPRING, RETURN	2	
9*	28461ZH8003	KNOB, RECOIL STARTER	1	
10*	28462ZH8003	ROPE, RECOIL STARTER	1	
11*	90003ZH8003	SCREW, SETTING	1	
12	90008ZE2003	BOLT, FLANGE 6 X10	3	

HONDA GX160K1QX2 — ENGINE LABELS ASSY.

ENGINE LABELS ASSY.



HONDA GX160K1QX2 — ENGINE LABELS ASSY.

ENGINE LABELS ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	87521ZH8020	ENBLEM 5.5	1	
3	87522ZH9000	LABEL, CAUTION	1	
6	87528ZE1810	MARK, CHOKE	1	
7	87530ZH8810	LABEL, SPECIFICATION (EXTERNAL)	1	
8	87532ZH8810	MARK, OIL ALERT (E)	1	
15	887586ZH7W00	LABEL, FUEL CAUTION	1	

OPERATION AND PARTS MANUAL

HERE'S HOW TO GET HELP

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

UNITED STATES

Multiquip Corporate Office

18910 Wilmington Ave. Tel. (800) 421-1244
Carson, CA 90746 Fax (800) 537-3927
Contact: mq@multiquip.com

Mayco Parts

800-306-2926 Fax: 800-672-7877
310-537-3700 Fax: 310-637-3284

Service Department

800-421-1244 Fax: 310-537-4259
310-537-3700

MQ Parts Department

800-427-1244 Fax: 800-672-7877
310-537-3700 Fax: 310-637-3284

Warranty Department

800-421-1244, Ext. 279 Fax: 310-537-1173
310-537-3700, Ext. 279

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