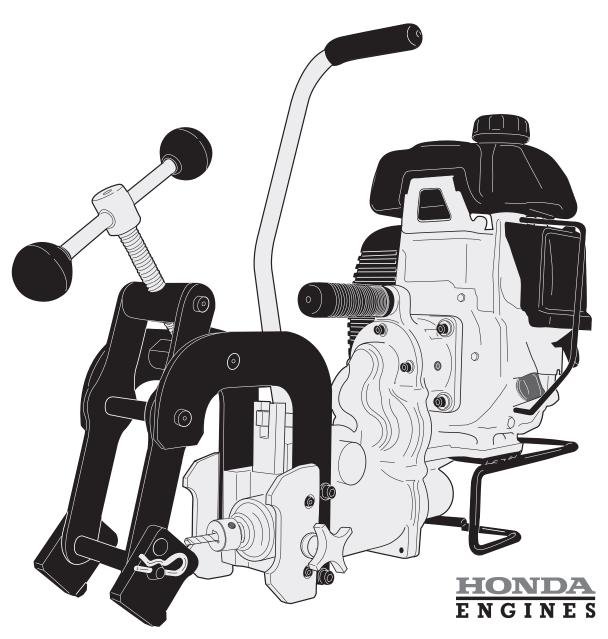


RB30 BONDING DRILL OPERATOR'S MANUAL

COVERS PART NUMBER 0030602



Serial #:	Date:

TRAK-STAR® Portable Gas Bonding Drill Model RB30

Welcome to Trak-Star®

Congratulations on your purchase of the Trak-Star Portable Gas Drill. Your model is designed to produce superior holes quickly and efficiently. Through constant innovation and development, Trak-Star is committed to provide you with hole-producing tools and products that lead the industrial world.

Before attempting to operate your new Rail Drill, please read all instructions first. These include the Operators Manual and Warning Label on unit itself. With proper use, care, and maintenance, your model will provide you with years of effective hole drilling performance. Once again, thank you for selecting our product and welcome

UNPACKING YOUR NEW RAIL DRILL

- Open shipping carton and remove the literature and hardware packages.
- Read and Follow All Instructions before attempting to operate your new Rail Drill.
- Complete and mail the Product Registration Card <u>NOW</u>. It is important that Hougen Manufacturing, Inc., have a record of product ownership.
- 4. Open all hardware packages and check contents.

04532 (2) Knobs

03522 Shaft

27019 Feed Handle Assy

01592 Coolant Bottle

27091 Oil

WARNING!

OIL MUST BE ADDED TO THE ENGINE BEFORE STARTING. FAILURE TO DO SO WILL RESULT IN ENGINE DAMAGE WHICH IS NOT COVERED UNDER WARRANTY.

- 5. Lift Rail Drill out of shipping carton using center carrying handle and rear support handle.
- Attach the large feed handle onto the drill using the 04919 Thumb Screw.
- Attach Clamp Handle using the enclosed 1/8" hex wrench.
- 8. ADD 8 OZ OF OIL TO THE MOTOR.
- Your new Rail Drill was factory adjusted prior to shipping. Check to make sure that all screws, motor hold-down screws, drill housing and shoe mounting screws are snug and have not vibrated loose in transit.
- Hookup Coolant Bottle / Hose Assembly (01592).
 Connect the quick-disconnect hose fitting to the Rail Drill
- Reread Safety Warnings listed in this Operator's Manual and on the drill unit to avoid injury. Follow operating procedures.

Your new Rail Drill is equipped with a twist arbor bore to accept TRAK-STAR Twister Bits. Order cutters separately. Install pilot thru cutter before inserting cutter into arbor.

INDEX

Section	Page	Section	Page
Welcome to TRAK-STAR	2	Important Notice	10
Unpacking Your New Rail Drill	2	Operating Instructions	10
Important Safety Instructions	3	Maintenance Engine/Drill	11
Model features	4	Clamp Exploded view & Parts	12
Installing / Removing the Bonding Bit	5	RB30 Exploded View	13
Installing / Replacing Cutter	6	Parts List	14
Drill and Pressurized Coolant System	7	Engine Parts Diagram and parts	15
Clamping Procedures	8	Commercial / Industrial Warranty	16
Positioning of Hole Location Template	9	- Factory Authorized Service Centers	

🔨 Important Safety Instructions 🥂

1. Read All Instructions

2. Keep Work area clean

Cluttered area and benches invite injuries. Keep dirt and chips from under Twister Bit area and drill shoe.

3. Consider Work Area Environment.

Keep work area well lit.

4. Keep Children Away

Do not let visitors contact tool.

5. Store Idle Tools

When not in use, tools should be stored in a dry, and a high or locked-up place -- out of reach of children.

6. Do Not Force Tool

It will do the job better and faster at the rate for which it was intended.

7. Use Right Tool

Do not force small tool or attachment to do the job of a heavy duty tool.

Do not use tool for purpose not intended -- for example do not use a circular saw for cutting tree limbs or logs.

8. Dress Properly

Do not wear loose clothing or jewelry. They might entangle with spinning chips or get caught in moving parts. Rubber gloves and nonskid footwear are recommended when working outdoors. Wear sturdy leather gloves when working indoors.

9. Always Wear Safety Glasses or Goggles.

10. Do Not Overreach

Keep proper footing and balance at all time.

11. Secure Work

Clamp work securely using appropriate shoe size and shape. Tighten Clamp by using two hands with handle placed in central position and tighten securely.

12. Maintain Tools With Care

Keep tools sharp and clean for better and safer performance.

Do not use dull or broken Twister cutters. Follow instructions for lubricating and changing accessories. Inspect gas line periodically and, if damaged, have repaired by authorized service facility. Keep handles dry, clean, and free from oil and grease.

13. Disconnect Tools

Disconnect spark plug wire from spark plug when not in use, before servicing, and when changing Twister Bits or accessories.

14. Remove Adjusting Keys and Wrenches

Form a habit of checking to see that keys and wrenches are removed from tool before Starting drill unit.

15 Stay Alert

Watch what you are doing. Use common sense. Do Not operate tool when you are tired.

16. Check Damaged Parts

Before further use of drill, a part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function.

Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation.

A part that is damaged should be properly repaired or replaced by an authorized service center unless otherwise indicated elsewhere in this instruction manual.

(See last page for authorized Service Centers)

17. Additional Safety Precautions

- Quill and cutter should never be used as a handhold.
- Keep hands and clothing away from all moving parts.
- Do not use Twister Bits where ejected slug might cause injury (slug ejected at end of cut).
- Be sure that all safety devices are properly adjusted and in use. Also, adhere to all operating instructions.
- · Do not attach Rail Drill to live 3rd rail track.

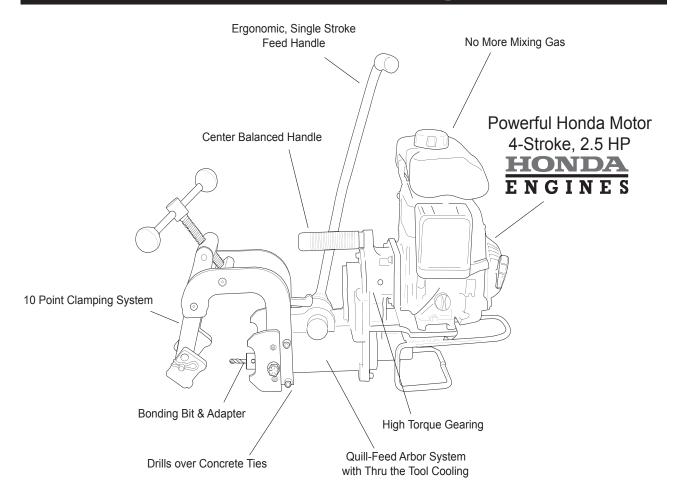
18. Non-Conforming Cutting Tools

The TRAK-STAR Model RB30 is designed to use TRAK-STAR Twister Bits or Adapters only. The use of drilling tools having different shank styles is not recommended as they may not tighten securely in the TRAK-STAR arbor with risk of accident or injury.

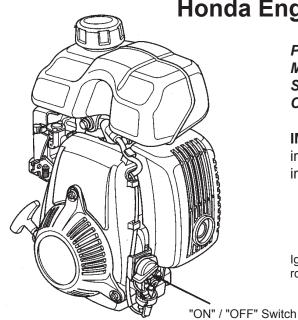
19. Save These Instructions

 Read all instructions concerning the motor in your HONDA Engine Operator's manual.

The World's Most Reliable 4-Stroke Bonding Drill



Honda Engine Instructions



PLEASE READ THE HONDA ENGINE OPERATOR'S MANUAL. INSTRUCTIONS ON THE OPERATION, SAFETY, AND MAINTENANCE PROCEDURES ARE CONTAINED IN A SEPARATE MANUAL.

IMPORTANT: Before starting the machine, it is imperative that the operator know and understand instructions for safe operation.

Add engine oil to motor and use regular unleaded gasoline only.

Ignition switch located on engine---stops motor, spindle, and cutter rotation. See diagram at left.

GAS MUST BE SHUT OFF BEFORE TRANSPORTING DRILL.

INSTALLING / REMOVING BONDING BIT ADAPTER

Installing the Bonding Bit Adapter

Be sure engine is stopped and turned off. Turn off coolant at shut-off.

- 1. Position the Bonding Bit so the flat is in-line with the set screw on the Bonding Bit Adapter. Push the Bonding Bit into the Bonding Bit Adapter and tighten the set screw.
- 2. Line the flat surface of the Bonding Bit Adapter with the dowel pin that is located at the end of the Arbor Body Assembly. Push the Bonding Bit Adapter in toward the Arbor Body and twist the Adapter clock-wise until it is locked into place.

The Bonding Bit Adapter is now installed and ready for use. Follow all standard operation procedures to operate your RB30 Bonding Drill.

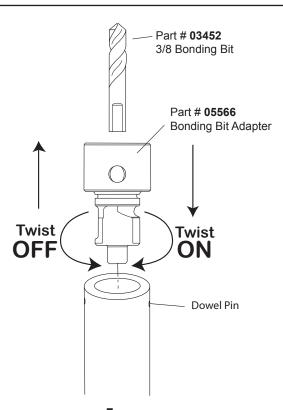
Removing the Bonding Bit Adapter

Be sure engine is stopped and turned off. Turn off coolant at shut-off.

- 1. Position the RB30 so the cutter area is easily access able. While removing the Bonding Bit Adapter, a small amount of coolant may drain out from the Arbor Body.
- 2. Push the Bonding Bit Adapter toward the Arbor Body and twist the Adapter counter clock-wise until the Adapter is unlocked and the flat on the Adapter is aligned with the dowel pin in the Arbor body. Pull the Bonding Bit Adapter out toward the Clamp Assembly.
- 3. With the assembly now free from the machine, you now have access to the set screw which holds the Bonding Bit in place. You can now use a hex key wrench and loosen the set screw to remove the Bonding Bit from the Adapter.

Refer to the installation steps listed above to re-install the Bonding Bit Assembly.

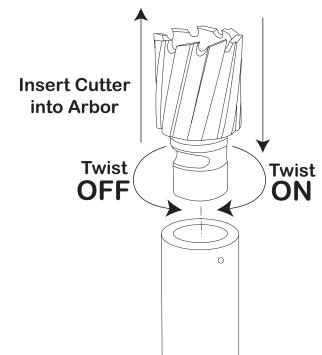
BONDING BIT ADAPTER ASSEMBLY



INSTALLING / REPLACING TWISTER™ BIT

The Trak-Star RB30 Bonding Drill is original set-up to utilize the Bonding Bit Assembly with the option of removing this assembly and install a Trak-Star Twister Bit. Refer to the previous page for removing the Bonding Bit Adapter Assembly and continue with the instructions below to install the Trak-Star Twister Bit.

- Be sure engine is stopped and turned off. Turn off coolant at shut-off. The spring seat system located within arbor was not designed to be 100% leak proof.
- Position arbor so the cutter area is easily accessible.
 Do not depress pilot pin during procedure to release seal. Doing so will result in releasing pressurized contents of arbor cavity and coolant loss. Some loss, however, is normal due to cavity between cutter shank and spring seat.
- 3. Insert pilot in shank end of Twister Bit.
- 4. Insert the Twister Bit until long flat on cutter shank is aligned with roll pin inside arbor. Twist cutter clockwise (do not depress pilot in case of cutter replacement for reason noted in #2). The cutter is automatically held into place.



TWISTER™ DISPOSABLE RAIL CUTTERS

- · Made from Premium H.S.S.
- Black Coating for Improved Performance in New Harder Rail.

TRAK-STAR Rail Drills are designed to use Twister Bits, and to achieve maximum efficiency from your unit, we recommend that no substitutes be used.

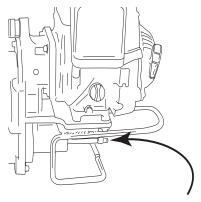
- ** Twister Bits are economical and disposable --there is no need to resharpen --- however it is
 possible. Tools can be sharpened 2 to 3 times.
 Send cutters to Trak-Star to the attention of the
 Resharpening Department.
- ** Twister Rail Bits have been shown to drill holes in rails up to 4X faster than twist drills or spade drills, and they produce clean, round, burr-free holes without the need to chamfer.
- ** Multiple cutting edge design, along with proper coolant flow, produces a cool cut raising the rail temperature in the hole no more than 35°F above ambient temperature. This prevents work hardening, stress cracking, service failures, and repeated repairs.

Cutter Size In Inches	Decimal Equivalent	Black TiAIN Coated Cutter Part Number	Carbide Tip Cutter Part Number
	Pilot for Tw	ister Bits 03635	
3/4	.7500	15324	18-15224
7/8	.8750	15328	18-15228
15/16	.9375	15330	18-15230
1	1.0000	15332	18-15232
1-1/16	1.0625	15334	18-15234
1-1/8	1.1250	15336	18-15236
1-3/16	1.3125	15338	18-15238
1-1/4	1.2500	15340	18-15240
1-5/16	1.3125	15342	18-15242
1-3/8	1.3750	15344	18-15244
1-7/16	1.4375	15346	18-15246
1-1/2	1.5000	15348	18-15248
1-5/8	1.6250	15352	18-15252
1-11/16	1.6875	15354	18-15254

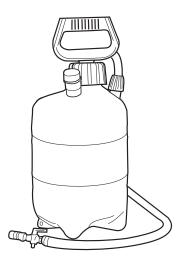
DRILL & PRESSURIZED COOLANT SYSTEM

- Install the Bonding Bit Adapter or the correct size Twister Bit with pilot and secure to drill arbor. See Cutter Installation procedure.
- 2. Install correct shoes for rail type being drilled and mount the machine to the rail.
- Fill coolant bottle with TRAK-STAR cutting fluid (a water soluble and biodegradable product) Conventional fill access is achieved by removing pump handle.
 Caution: Contents under pressure. Partially open to slowly release pressure before removing.
- Attach coolant bottle quick connect hose fitting to drill on the backside of drill under motor.
- 5. Pressurize coolant bottle (approximately 20 pumps)
- With the Bonding Bit Adapter installed, the coolant will start flowing when the on/off valve is turned to the "ON" position.
- 7. When using a Twister Bit, move the cutter foward, using the feed handles and watch for coolant flow from the end of the cutter. NOTE Coolant is under pressure -- stay out of path of spray. If coolant does not flow, rotate valve further to open or unclog coolant system.

Do Not Use Straight Water or Window Washer Fluid. Damage to Drill Will Occur! Only Use Trak-Star RotaMagic Coolant.



Coolant Quick Connect Hose and Nipple



Coolant System Replacement Parts

01569 On/Off Valve 05621 Quick Connect Fitting 01592 Coolant Bottle and Hose Assy

ROTAMAGIC™ CONCENTRATE CUTTING FLUID

A good flow of cutting fluid to the tool is important. It cools and lubricates the cutting edge, helps evacuate the chips, keeps the slug from expanding, and helps eject the slug. Various mineral and sulphur base oils are quite popular, however, water base solutions have better cooling qualities.

Listed is our own recommended Concentrated Cutting Fluid for Twister Bits and similar cutting tools. It is a water soluble, biodegradable product. This cutting fluid contains no ingredients that are on the U.S. Government Hazardous Materials List. It is a super concentrated form that will require a 10:1 mixture of water.

Order Number	Size Description
11742-4	4 Gallons**
11743	5 Gallons+

- ** MEASURED AMOUNT OF CONCENTRATE. COMES IN 4-1 GALLON CONTAINERS AND MAKES 44 GALLONS OF USABLE CUTTING FLUID
- + COMES IN 5-GALLON CONTAINER, FULL, WILL MAKE 55 GALLONS OF USABLE CUTTING FLUID

CLAMPING PROCEDURES

WARNING: IMPROPER CLAMPING WILL CAUSE PREMATURE CUTTER FAILURE

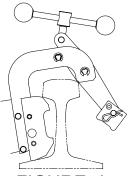
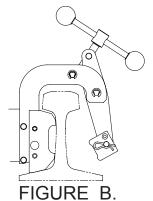


FIGURE A.

STEP #1:

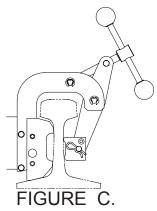
WITH CLAMP IN OPEN POSITION, REST UNIT ON RAIL BASE. BOTTOM OF SHOES SHOULD CONTACT TAPER ON RAIL BASE. (SEE FIG. A)

** PERFORMANCE TIP: CLOSE CLAMP UNTIL CLAMP PAD CONTACTS WEB OF RAIL PRIOR TO STEP #2.



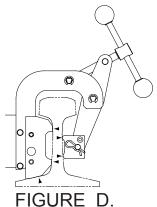
STEP #2:

RAISE REAR OF RAIL DRILL TO LOCATE SHOES IN PROPER POSITION. (SEE FIGURE B)



STEP #3:

WHILE MAINTAINING CONTACT BETWEEN SHOES AND RAIL, TIGHTEN CLAMP. (SEE FIG. C)



STEP #4:

WHEN UNIT IS FIRMLY CLAMPED, CHECK FOR PROPER SHOE AND PAD CONTACT ON BOTH SIDES (SEE FIG. D)

* When properly clamped to the rail there will be a small gap between the top of the shoe and the rail.

OPTIONAL HOLE LOCATION TEMPLATE

Template is positioned on head of rail with tapered tip flush with end of rail and side locking screws fastened to rail head. Notches in template give precise location of hole centerlines to be drilled.

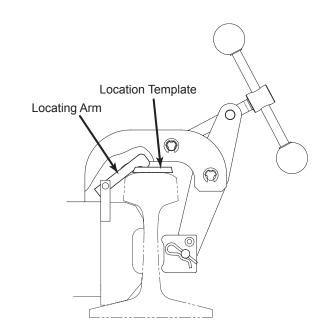
The rail clamp assembly has a locating arm which rests in the template notches. The locating arm is adjustable to accommodate the full range of rail sizes.

To use the locating arm, raise the drill unit over the rail with the template attached and gently rest drill down until shoes make contact with the rail. Flip the arm to make contact with the template. Slowly slide drill across the template until the arm falls into notch.

The arm must contact the sides of the matching notch. Following the Clamping Instructions, clamp unit onto rail. When the hole is completed, raise the arm by flipping the arm back toward the body of the drill. Before drilling next hole remove chips around cutter. Then move the drill sideways, ensuring the arm is clear of the notch, and flip arm down. Slide the drill sideways until arm falls in the next notch, and repeat the procedure as necessary.

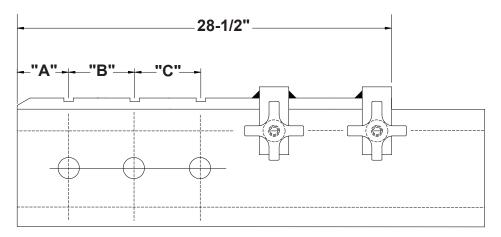
Note: The locating arm must be flipped back, resting on the body of the drill before putting the drill unit on the rail. Failure to do so can result in damage to the hole locating arm system.

Hole location templates are offered as optional equipment. Four of these templates are provided with established hole spacings. The 40570 template is produced to customer specified hole spacing. See chart for the template to match your application.



Template Part No.	Hole Spacing
40570	Customer Specified
40701	3-1/2" X 6" X 6"
40702	2-11/16" X 5-1/2" X 5-1/2"
40703	2-1/2" X 5" x 5"
40704	2-1/2" X 6-1/2" X 6-1/2"
40706	2- 23/32" x 5-1/2" x 5-1/2"

CUSTOM TEMPLATE SPACING



Specify "A", "B", "C" when ordering custom template

Important Notice

- 1. Make sure cutter is properly installed.
- 2. The #1 cause of premature cutter failure is improper clamping. (see page 7 for clamping procedures.)
- 3. The # 2 cause of premature cutter failure is improper feed, usually feeding too slow.
- 4. Always use caution when contacting the rail with the cutting tool. Allow the cutter to completely enter the rail before applying full feed pressure.
- 5. GAS MUST BE SHUT OFF BEFORE TRANSPORTING DRILL.

OPERATING INSTRUCTIONS

- NEVER RUN ENGINE INDOORS OR IN ENCLOSED, POORLY VENTILATED AREAS. ENGINE EXHAUST CONTAINS CARBON MONOXIDE, AN ODORLESS AND DEADLY GAS.
- KEEP HANDS, FEET, HAIR, AND LOOSE CLOTHING AWAY FROM ANY MOVING PARTS ON ENGINE AND EQUIPMENT.
- WARNING TEMPERATURE OF MUFFLER AND NEAR BY AREAS MAY EXCEED 150°F (65°C). AVOID THESE AREAS.
 - Make sure workpiece, cutter and shoe surfaces are free of chips, etc.
 - 2. Place locator template on rail head.
 - 3. Align drill on locator with the Hole Location Template.
 - 4. Clamp drill to rail and insure proper 10 point contact.
 - 5. Turn on coolant (pump to pressurize system).
 - Move choke lever to "FULL CHOKE". If restarting a warm engine after a short shutdown, move choke lever to "NO CHOKE".
 - 7. Turn motor on/off switch to "ON" position.
 - 8. Move throttle to idle position.
 - Grasp starter handle and pull rope out, slowly, until it
 meets resistance. Let rope rewind slowly. Then pull
 rope with a rapid full arm stroke. Let rope return to
 starter slowly.
 - 10. Repeat step #9 until engine fires.
 - 11. Move throttle to run position.

- 12. Manually feed cutter very gently to start cutting.
- 13. Once all teeth are cutting aggressively, feed tool through workpiece at an even rate. Do not overload unit to induce an arbor stalling situation. Certain rail compositions work harden easily. Do not pause during cut nor release feed pressure if changing hand grip on feed handle. This will result in premature cutter wear and drilling problems while in the cut.
- Move feed handle to retract arbor and cutter. Slug should eject from spring loaded pilot pin pressure.
- 15. Move throttle to idle position.
- 16. At the end of the cut, move ignition switch on engine to "STOP" or "OFF" position.
- 17. Loosen clamp and remove drill to clean chips from around cutter. Drill cycle is complete and you are ready to go on to the next hole. Shutting off coolant after use is suggested, if use is intermittent.
- When using a Trak-Star Twister Bit.

 If Slug Has Not Fallen Free, disconnect spark plug wire from spark plug and shut off coolant supply. Use a screwdriver to carefully flip slug by inserting it between slug flange and cutter gullet. It generally will remove easily while discharging a squirt of coolant. Avoid prying with force, damage to the cutter and cutting edge may result.
- WHEN EQUIPMENT WILL NOT BE USED FOR EXTENDED PERIODS, DISCONNECT SPARK PLUG WIRE FROM SPARK PLUG AND KEEP IT AWAY FROM SPARK PLUG.

NEVER STORE ENGINE WITH FUEL IN TANK INDOORS OR IN ENCLOSED, POORLY VENTILATED AREAS, WHERE FUEL FUMES MAY REACH AN OPEN FLAME, SPARK, OR PILOT LIGHT AS ON A FURNACE, WATER HEATER, CLOTHES DRYER OR OTHER GAS APPLIANCE.

MAINTENANCE - ENGINE/DRILL

The RailBoss requires minimal maintenance to keep drill in top working condition.

- Every four to six weeks or as needed apply a light coat of grease to the quill and arbor assembly and the large screw that tightens the handle.
- · Keep drill clean.
- Maintain motor as outlined in your Honda motor operator's manual.

AIR CLEANER:

IMPORTANT: NEVER RUN ENGINE WITHOUT COMPLETE AIR CLEANER INSTALLED ON ENGINE

1. To remove and install filter:

Press tabs on the top of the air cleaner, and remove the cover. Remove and inspect the foam filter for discoloration or dirt accumulation. If either is present, service per below instructions. Clean inside of cover and body thoroughly.

2. To service filter

Foam Filter: Clean and re-oil every three months or every 25 operating hours. Clean and re-oil daily if use in extremely dusty conditions. Wash in water and detergent solution and squeeze (don't twist) until all dirt is removed. Rinse thoroughly in clear water. Wrap in a clean cloth and squeeze (don't twist) until completely dry. Saturate with motor oil and squeeze to distribute oil and remove excess oil.

3. Reassemble air cleaner.

SPARK PLUG:

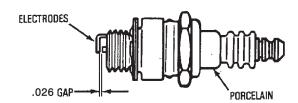
- Check spark plug yearly or every 100 operating hours.
- Clean around spark plug. Remove and inspect spark plug.
- Replace spark plug if electrodes are pitted, burned, or porcelain is cracked. Use NGK CR5HSB or equivalent.
- 4. Check electrode gap with a wire feeler gauge and set gap at .026" if necessary.
- 5. Install spark plug and tighten securely.

MUFFLER AND CYLINDER EXHAUST PORTS:

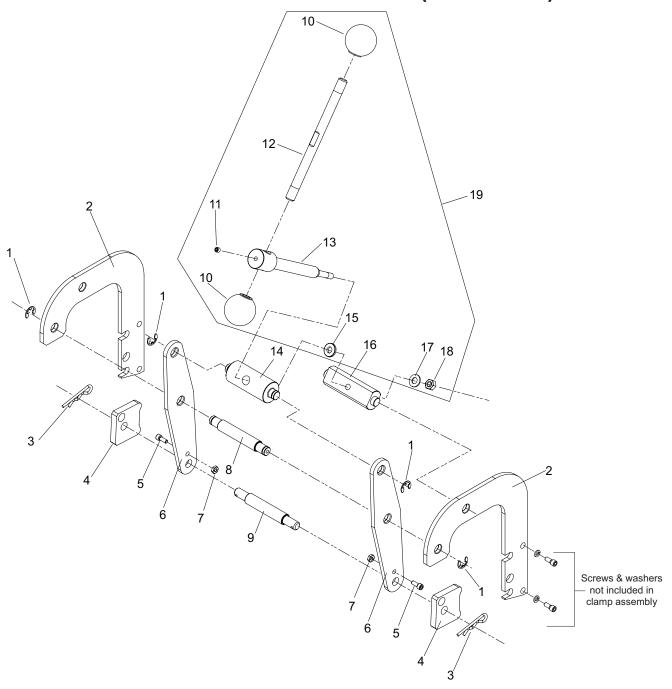
The muffler and cylinder exhaust ports require cleaning after every 100 hours of operation. For this maintenance procedure, we recommend that you take your engine to a Authorized TRAK-STAR Service Center or your Honda Registered Service Dealer.

COOLING SYSTEM:

Important: Frequently remove debris from cooling fins, air intake screen, and levers and linkage. This will help ensure adequate cooling and correct engine speed.

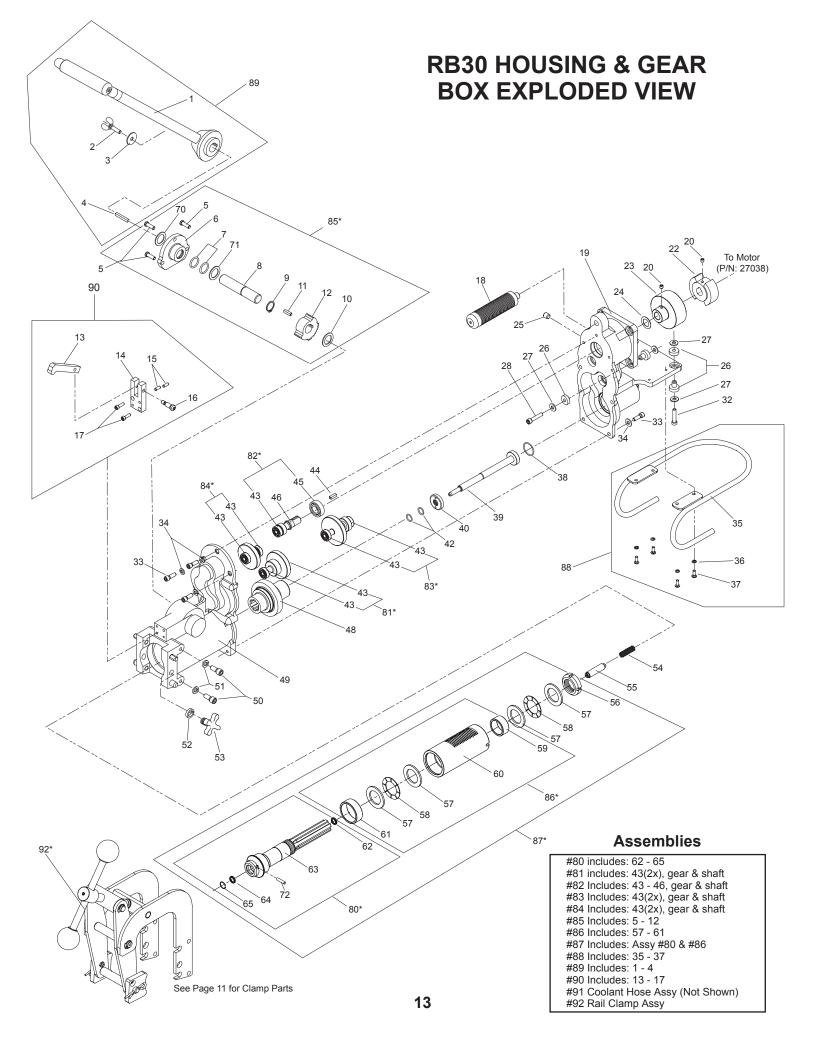


CLAMP EXPLODED VIEW (P/N: 27115)



ltem	Part #	Description	Qty
1	27066	Retaining Clip Set	1
2	27110	Primary Clamp Arm	2
3	03501	Hitch Pin	2
4	27062	Clamp Pad	2
5	90098	Screw #10-24 x 3/4"	2
6	27022	Secondary Clamp Arm	2
7	10662	Lock Nut - #10-24	2
8	27024	Pin	1
9	27023	Pin	1
10	04532	Knob	2
11	02470	Set Screw 1/4-28 x 3/8	1

Item	Part #	Description	Qty
12	03522	Clamp Turn Handle	1
13	27027	Clamp Feed Screw	1
14	27026	Bushing	1
15	04782	Flat Washer	1
16	27025	Bushing	1
17	40074	Flat Washer 5/16"	1
18	03563	Hex Nut 5/16-18	1
19	27080	Clamp Handle Assy	1



HOUSING & GEAR BOX PARTS

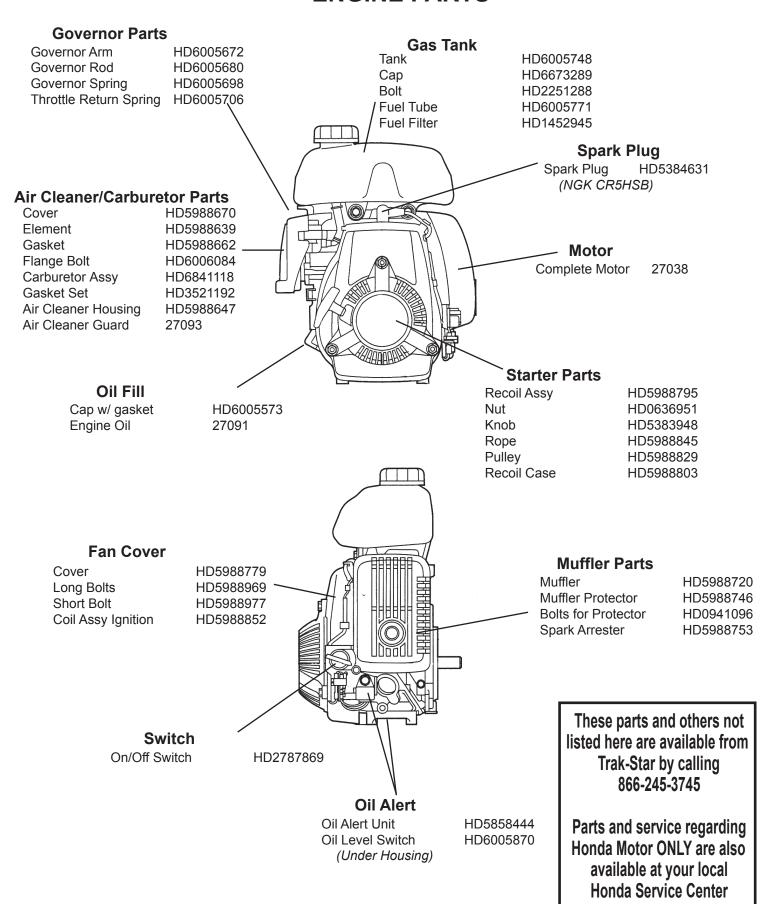
Item	Part #	Description	Qty
1	27019	Feed Handle Assy	1
2	04919	Thumb Screw	1
3	04809	Washer Flat	1
4	27059	Key	1
5	04815	Screw	3
6	27046	Feed Gear Bearing	1
7	04794	O Ring	1
8	27047	Feed Gear Shaft	1
9	24160	Retaining Ring	1
10	04793	Flat Washer	1
11	27048	Key	2
12	27051	Feed Gear	1
13	27029	Locating Arm	1
14	27028	Bracket Locator	1
15	01153	Pin Dowel 3/16 x 1/2	1
16	04859	Screw	1
17	40038	Scr-Shc 10-32	1
18	27060	Carrying Handle	1
19	27005	Motor Housing	1
20	11050	Scr-Soc Set 1/4-28	1
22	27064	Clutch Rotor	1
23	27063	Clutch Housing	1
24	04838	Washer - Shim	1
25	02071	Pipe Plug 1/8-27	1
26	04810	Motor Mount	1
27	90027	Washer-Flt 1/4 ID	1
28	01121	Scr-Shc 1/4-28	1
32	75313	Scr-Shc M6	1
33	10624	Scr-Shc 1/4-20	1
34	90028	Washer-Hel Lock 1/4"	1
35	27054	Support Handle	1
36	50038	Washer-Heli	1
37	90077	Scr-Bhc 10-32 x 1/2	4
38	04836	O Ring 1" ID	1
39	27035	Ejector Pin Assy	1

Item	Part #	Description	Qty
40*	27016	Coolant Seal	1
42	04807	O Ring	2
43	24100	Ball Bearing	1
44	27057	Key	1
45	04804	Ball Bearing	1
46	27014	Engine Drive Shaft	1
48	27015	Drive Gear/Spindle	1
49	27113	Housing Assy	1
50	40558	Scr Shc 5/16-18	4
51	40107	Washer 5/16-Heli	4
52	40110	Washer Lock 1/2	2
53	04918	4 Point Handle	2
54	04787	Spring	1
55	27033	Pilot Pin	1
56	27031	Brg-Nut	1
57	04791	Thrust Washer	4
58	04788	Thrust Bearing	2
59	04790	Needle Bearing	1
60	27034	Quill	1
61	40232	Bearing-Roller 40MM	1
62	07437	O Ring	1
63	27032	Arbor	1
64	04736	Lip Seal	1
65	04737	Retaining Ring	1
70	05196	Teflon Washer	1
71	24088	Flat Washer	1
72	04792	Pin-Dowel 3/16 x .90	1
73	04797	Bearing	1

^{*} MUST ALSO PURCHASE # 42

ASSEMBLIES		
Item	Part #	Description
	27038	2.5 HP Honda Motor
80	27040	Arbor Assy
81	27041	Gear Assy #3
82	27044	Drive Gear Assy
83	27042	Gear Assy #2
84	27043	Gear Assy #1
85	27045	Feed Gear Assy
86	27050	Quill Assy
87	27030	Arbor & Quill Assy
88	27081	Support Bracket Assy
89	27019	Feed Handle Assy
90	27082	Locating Pin Assy
91	27065	Coolant Hose Assy
92	27115	Clamp Assy
93	27113	Housing Assy

ENGINE PARTS



Commercial / Industrial Limited Warranty

Hougen Manufacturing, Incorporated warrants its Trak-Star Rail Drills, Portable Magnetic Drills, Electro-hydraulic Hole Punchers for one (1) year and other products for ninety (90) days from date of purchase against defects due to faulty material or workmanship and will repair or replace (at its option) without charge on any items returned. This warranty is void if the item has been damaged by accident or unreasonable use, neglect, improper service, or other causes not arising out of defects in material or workmanship. No other expressed warranty is given or authorized. Hougen Manufacturing, Inc., disclaims any implied warranty of MERCHANTABILITY or FITNESS for any period beyond the expressed warranty and shall not be liable for incidental or consequential damages. Some states do not allow exclusions of incidental or consequential damages or limitation on how long an implied warranty lasts and, if the law of such a state governs your purchase, the above exclusion and limitation may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

To obtain warranty service, return the item(s), transportation prepaid, to your nearest Factory Authorized Repair Center or to Hougen Manufacturing, Inc. 3001 Hougen Drive, Swartz Creek, Michigan 48473.

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FACTORY AUTHORIZED WARRANTY REPAIR CENTERS

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