

**4-Cycle Gas Powered
Impact Wrench
910500
Operating Manual**



4-Cycle Gas Powered Impact Wrench 910500 Record of Changes

Rev No.	Date	Description of Changes
Rev 1	8.2022	Initial release.
Rev 1.1	10.2023	Update Technical Support & Service information

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Section 1: Overview and Safety

Gas Powered 1-inch Impact Wrench Overview

Racine Railroad Products designs and manufactures equipment primarily for the repair and new construction of rail and railroad tie track maintenance.

Our product line focuses on rail fastening application/removal/adjustment equipment, other tie material (OTM) reclamation, wood and concrete railway tie repair, and tie plate handling/distribution.

Ergonomic

The 1-inch (25 mm) Gas Impact Wrench is well balanced for either horizontal or vertical use. The roll bar doubles as handholds with vibration dampening rubber grips. The large front handle easily accommodates gloved hands.

Unique Design

The Impact Wrench engine incorporates a unique design for maximum performance.

Versatile

Can be used to drill lag screw holes for tie plate applications.

Durable

Roll Bar protects engine components and fuel tank. The throttle trigger and shut off switch are fully enclosed inside roll bar for further protection.

Lightweight and Powerful

Weighing 40 lbs (18 kg), the high-power four-stroke engine is suitable for remote areas.

Note: Information in this document is subject to change without notice.

Warranty Terms and Conditions

Warranty Period

Each new machine and new parts of our manufacture are warranted against defects in material and workmanship for one year from the date of shipment from our factory.

When contacting customer service for factory parts, service or warranty support please provide the:

- Racine Railroad Products Model
- Serial Number
- Any locally assigned identification

Vendor Parts Warranty Period

Other equipment and parts used, but not manufactured by Racine Railroad Products, Inc., are covered directly by the manufacturer's warranty for their products.

Warranty Parts and Service

We will repair or replace, without charge, F.O.B. factory, Racine, Wisconsin, USA, any part Racine Railroad Products manufactures which is proven to be defective during the warranty period.

Material claimed defective must be returned, if requested, to the factory within 30 days from the date of the claim for replacement. Ordinary wear and tear, abuse, misuse, and neglect are not covered by this warranty. Depending upon the circumstances, we may provide technical assistance and/or technical service support, without charge, to assist in the correction of warranty related problems.

Non-Warranty Parts and Service

Material damaged through normal wear and tear, abuse, misuse and/or neglect are not covered by our warranty and should be ordered directly from Customer Service.

Note: Parts for models that are no longer in production may not be available.

Non-Warranty Parts Orders

When placing a parts order please provide the following information:

- Company Name and Billing Address
- Purchase Order Number and Issuing Authority
- Shipping Address
- Special Handling Instructions
- Contact Phone Number
- Machine Model and Serial Number
- Part Numbers and Quantities Being Ordered

Note: *Please use Racine Railroad Products part numbers when ordering parts.* Racine Railroad Products part numbers are shown in the parts lists and drawings of this manual and have only six (6) numbers.

Any part number with other than six numbers (e.g., contains alpha-numeric characters) is a Vendor Part Number and **not** a Racine Railroad Products part number

Safety Information

For safe installation and operation of this equipment, carefully read and understand the contents of this manual. Improper operation, handling, or maintenance can result in equipment damage and personal injury.

Only trained and authorized personnel should be allowed to operate this machine. In addition, all personnel at the worksite (gang) should be aware of the safety concerns and their individual responsibilities prior to working with this machine.

Please read and comply with all the safety precautions in this manual **before** operating this machine. Your safety is at risk.

Safety Terms



DANGER indicates a hazardous operating procedure, practice, or condition. If the hazardous situation is not avoided death or serious injury will occur.



WARNING indicates a hazardous operating procedure, practice, or condition. If the hazardous situation is not avoided death or serious injury could occur.



CAUTION indicates a potentially hazardous operating procedure, practice, or condition. If the hazardous situation is not moderate or minor injury could occur.

Note: Indicates an essential operating procedure, practice, or condition. No personal injury is possible.

Machine Use and Safety Precautions



WARNING Failure to follow safety precautions when operating this equipment can result in serious injury or death to the operator or other persons in the area.

Observe the following precautions whenever you are operating, working on or near this equipment.

Operator Safety

Do not use this machine for other than its intended purpose.

Always wear appropriate personal protective clothing when operating this equipment: e.g., Orange safety vest, hard hat, safety glasses with side shields, hearing protection, steel-toed safety boots, leather gloves, dust respirator, etc.

Always lift heavy objects with the knees and legs, not the arms and back.

Always keep hands, arms, feet, head, clothing, etc., out of the operating area and away from all rotating or moving components when operating, working on or near this machine.

Always operate the engine only in a well-ventilated area and make sure that the air filters, air filter covers, and muffler are in good condition.

Do not wear loose clothing, jewelry, radio belts, etc., when operating, working on or near this equipment. They can be caught in moving parts and may result in severe injury.

Inspect safety decals and replace when they become unreadable or are damaged.

Always comply with all instructions provided on any decals or placards installed on the machine and with any relevant amplifying information provided in this manual or other general operating procedures.

Always keep the machine clean and free of debris. Operate the machine in a safe and responsible manner. Exercise caution when fueling, working on or near rotating or moving components, hot components, and fuel systems. Be aware of potential fire hazards and prevent sparks, exhaust, etc., from starting fires on the machine and/or work area.

Always shut off the engine. Make sure that all controls are in a safe position and install all appropriate locking and safety devices before doing any of the following:

- Lubricating
- Adjusting
- Installing Tooling
- Making Repairs
- Performing Service

Do not grab or hold the unit with the rotating anvil.

Hold the handles firmly with both hands and make sure to stand on a firm base or ground.

Do not touch the spark plug or the high voltage cord during operation as it may cause electric shock.

To avoid burn do not touch places like the engine, muffler, or exhaust when it will get very hot during use and eve after the engine stops. It takes time to cool down.

If the fuel is leaking during operation, stop the engine immediately, and repair. It may cause a fire.

When operating for a long period of time, take a break from time to time to avoid possible white finger disease which is caused by vibration.



Antivibration systems do not guarantee that you will not sustain white finger disease or carpal tunnel syndrome.

Therefore, continual, and regular users should monitor closely the condition of their hands and fingers. If any of the above symptoms appear, seek medical advice immediately.

Tool Safety

Always comply with all Lock Out / Tag Out Procedures and other safety procedures established for the local work environment.

Do not make any modifications without authorization or written approval from Racine Railroad Products. Replace all Racine Railroad Products and OEM parts with genuine Racine Railroad Products and OEM parts. Using non-OEM parts may compromise the safety of the machine.

Always make sure that all guards, covers, belts, and operating components are in good working order and that all controls are in the appropriate position before starting the engine.

Always inspect the entire tool before each use. Replace damage parts. Check for fuel leaks and make sure all fasteners are in place and securely fastened.

Replace parts that are cracked, chipped, or damaged in any way before using the tool.

Use only accessories recommended by Racine Railroad Products for this tool.

Use only genuine replacement parts as recommended by the manufacturer.

Fuel Safety

Petrol is highly flammable and must be handled and stored carefully. Use a container approved for fuel for storing petrol and/or fuel/oil mixture.

Use an approved container for fuel.

Do not smoke or allow smoking near fuel or the tool or while using the tool.

When filling up with fuel, stop the engine and make sure the engine is cool and choose places where there are no flammables and there is well ventilation.

Never open the fuel tank cap immediately after stopping the engine.

When removing the fuel tank cap, gasoline may blow out, so loosen it carefully.

Do not overfill the fuel tank. Stop filling 10mm from the top of the tank.

Tighten the fuel cap securely after refueling.

Mix and pour fuel outdoors where there is no sparks or flames.

Wipe up all fuel spills before starting the engine.

Move at least 3-feet / 3-meters away from the fueling site before starting the engine.

Drain the tank and run the engine dry before storing the machine. It is recommended that the fuel be emptied after each use. If fuel is left in the tank, store the tool so fuel will not leak.

Store tool fuel in area where fuel vapors cannot reach sparks or open flames from water heaters, electric motors or switches, furnaces, etc.

Transport and Storage

Carry the tool by hand with the engine stopped and the muffler away from your body.

Allow the engine to cool, empty the fuel tank, and secure the tool before storing or transporting in a vehicle.

Store the tool out of the reach of children.

Clean the unit carefully and store it in a dry place.

Make sure the engine switch is off when transporting or storing.

Section 2: Specifications and Installation

Specifications

Impact Wrench

Square drive section	1-inch [25.4 mm]
Max torque	5000 r/min / 2.2 Nm
Weight (no fuel)	40 lbs [18 kg]
Dimensions	L 25.5 in x H 14.5 in x W 10.6 in L 650 mm x H 370 mm x W 270 mm

Engine

Engine model	Honda GX50
Type	4-stroke, forced air cooling
Recommended fuel	Octane 90 or higher
Fuel tank capacity	0.166 gal (0.63 liter)
Engine oil capacity	4 oz. (0.13 liter)
Recommended oil	SAE 10W-30
Recommended spark plug	CM5H (NGK), CMR5H (NGK)

Accessories

466015	1" SOCKET
464477	1-13/16" SOCKET
464775	1-5/16" SOCKET
464476	1-5/8" SOCKET
464478	2-3/16" SOCKET
465844	DOME HEAD LAG SCREW SOCKET
467559	1- 3/8" SOCKET DEEP WELL
466015	1" SOCKET DEEP WELL
465786	1-1/4" SOCKET DEEP WELL
464517	1-13/16" SOCKET DEEP WELL
464516	1-5/8" SOCKET DEEP WELL
465719	2" SOCKET DEEP WELL
464518	2-3/16" SOCKET DEEP WELL
464774	7/16" SOCKET DEEP WELL

Installation

Unpacking Instructions

Upon receiving your impact wrench, promptly remove it from the shipping container. Always keep the top side of container up. Inspect unit for damage which may have incurred during shipping and report it to carrier for claim.

Be sure to read this instruction manual and do not operate the product or change the accessory until you fully understand it.

Please keep the instruction manual in a safe location so as not to lose it. If lost, please order a new one.

This product is a tool designed and developed for the purpose of tightening and loosening bolts and nuts using the engine as a power source.

Tool Preparations

The impact wrench requires some assembly before use.

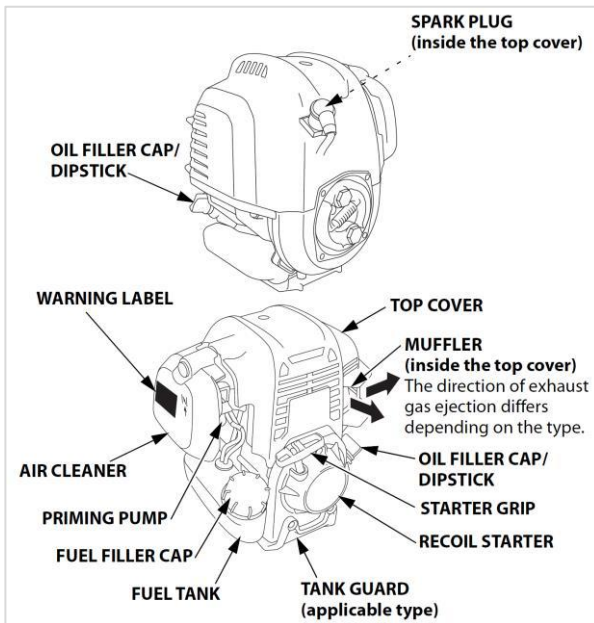
After unpacking, install the supplied accessories.



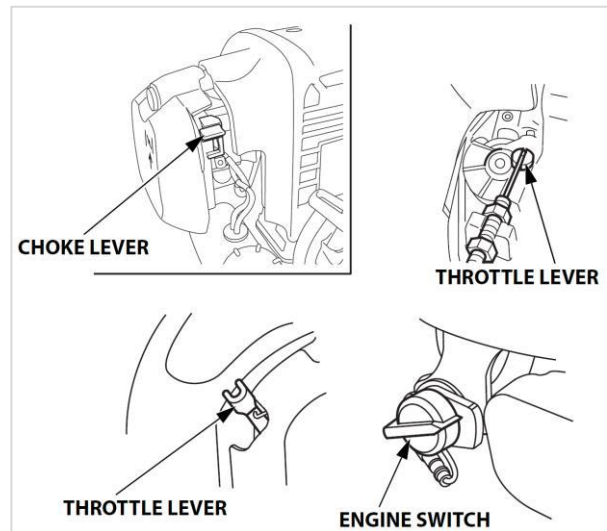
WARNING Never stick foreign objects, fingers, or other extremities into the moving mechanism. Failure to follow these instructions may lead to severe personal injury or tool damage.

Section 3: Tool Operation

Engine



Engine Components



Engine Controls

Engine Start Up

Always check the following before starting the engine:

1. Before each use, look around the engine for signs of oil or fuel leaks.
2. Remove any excess dirt or debris, especially around the muffler and recoil starter.
3. Look for signs of damage.
4. Check that all shields and covers are in place and all nuts, bolts, and screws are tightened.

Check the Engine

Check the fuel level.

- Starting with a full tank will help to eliminate or reduce operating interruptions for refueling.



WARNING Gasoline is highly flammable and explosive. You can be burned or seriously injured when handling fuel.

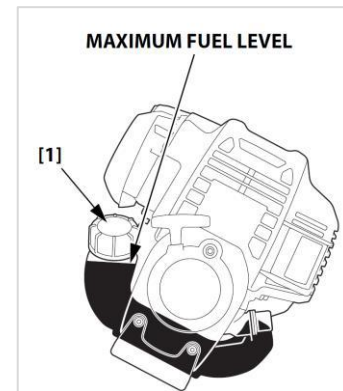
Stop the engine and let it cool before handling fuel.

Keep heat, sparks, and flames away.

Handle fuel only outdoors.

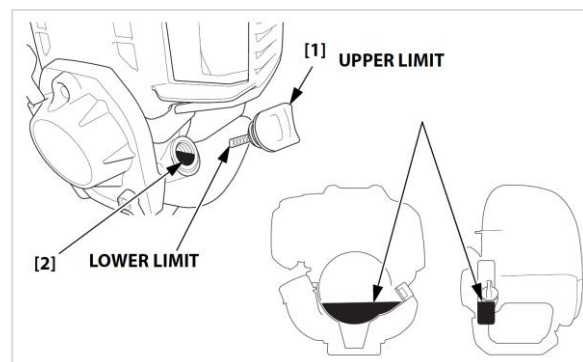
Keep away from your vehicle.

Wipe up spills immediately.



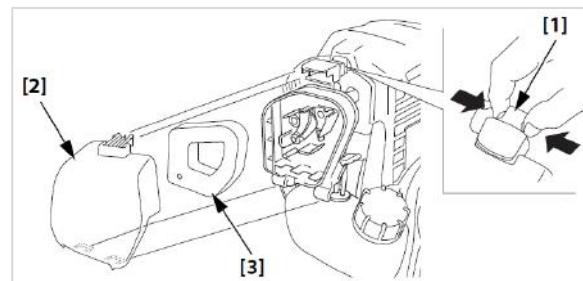
Check the engine oil level.

- Running the engine with a low oil level can cause engine damage.



Clean the air filter element.

- A dirty air filter element will restrict air flow to the carburetor, reducing engine performance.



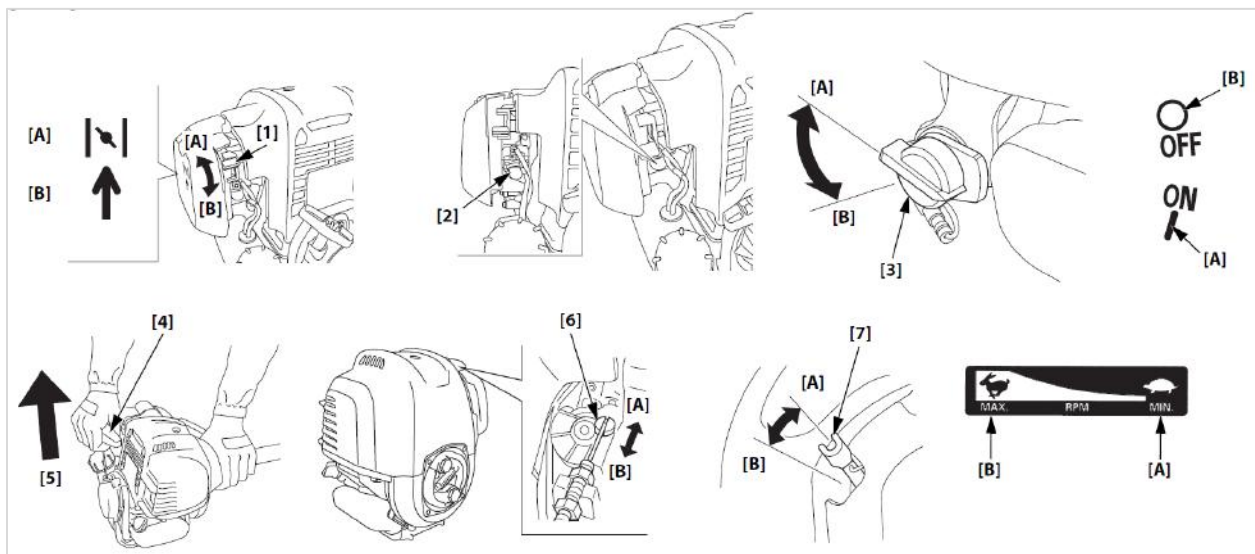
Starting the Engine

1. To start a cold engine, move the choke level [1] to the CLOSED [A] position.
 - To restart a warm engine, leave the choke lever in the OPEN [B] position.
2. Press the priming pump [2] several times until the priming pump is filled with fuel.
 - Even if the priming pump is pressed too many times, the extra fuel will return to the fuel tank.
 - If the priming pump is not pressed enough, the engine may not start.
3. Turn the engine switch [3] to the ON [A] position.
4. Pull the starter grip [4] lightly until you feel resistance. Then pull briskly in the direction of the arrow [5]. Return the starter grip.

Note: Do not allow the starter grip to snap back against the engine. Return it gently to prevent damage to the starter.

5. Move the choke level [1] to the OPEN [B] position.
6. Let the engine idle for 3- 5 minutes.
7. Adjust the throttle to required rotation speed and torque.

Note: For the first 20 hours, operate the engine at medium speed.



Stopping the Engine

1. Release the throttle lever to decrease engine speed.
2. Move the throttle lever to the MIN [A] position.
3. Turn the engine switch to the OFF [O] position.
4. Place the tool on a firm stand or solid floor and turn the lever to the N (neutral) position.

Operation

When increasing the engine speed, operate the throttle slowly. If operating too fast may cause unexpected accidents.

Operate engine with both hand on the machine.



Once starting the engine, do not leave the tool alone. Always hold handle tightly so that tool will not move around on the stand or floor

Before and during operation, always take a firm stance and keep safety position from slipping or falling.

- Do not touch the spark plug cable and the spark plug cap during engine operation. There is risk of electric shock.
- Do not touch rotating parts. It is very dangerous and may cause injury.
- Do not run idle with the accessory tool attached.
- Check the direction of rotation before starting the product.
- Be sure to stop the engine when stopped or when changing the tools and parts.
- Do not touch the tools and screws during operation because they are hot due to friction.
- Engine and other parts become hot. Do not touch anything other than the handle or the operation unit.
- If an abnormal occurs, stop the engine immediately and stop the work.

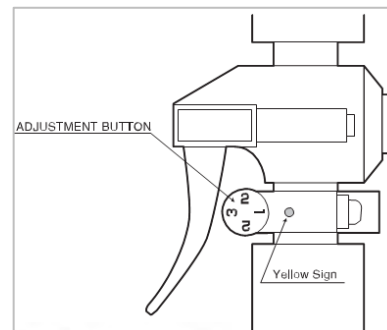
Torque Adjustment

The impact wrench has full throttle mode and half throttle mode by pushing the adjustment button.

Make fine adjustments using the adjustment switch during half throttle.

[1] is maximum

[3] is minimum.



Socket Installation

There is a pin hole at the end of the anvil (drive).

This have to be aligned with the pin hole of the socket and secured with the pin and O-ring.



Personal Injury. If the socket is not securely installed, the socket may come off and pop out, causing injury. Never run idle with a socket.

Section 3: Troubleshooting & Maintenance

Problem	Possible Cause	Remedy
Engine does not start.	Fuel System	
	Wet spark plugs due to too much intake of fuel.	<ol style="list-style-type: none"> 1. Remove spark plug. 2. Exhaust exceeded fuel by pulling recoil starter handle 5-6 times. 3. Install spark plug. 4. Turn choke lever to open position and pull recoil starter handle.
	Bent or disconnection of fuel pipe.	Repair.
	Insufficient pressing of priming pump	Press priming pump for several and send the fuel.
	Electrical System	
	Ignition stop switch in stop position.	Turn to the ON position.
	No spark.	<ol style="list-style-type: none"> 1. Bad connection/Ignition coil. 2. Incorrect air gap/Ignition coil. 3. Bad ignition coil.
	Short circuit of stop switch lead wire.	Repair or replace.
	Dirty plug.	Clean up or replace.
	Wider spark plug gap.	Adjust correct gap to 0.6 mm.
	Poor connection of high voltage cord in ignition with spark plug.	Correct connection.
Bad ignition coil.	Replace.	
Engine stalls soon after starting or stops.	Fuel System	
	Choke lever in closed position	Turn to open position.
	Air goes through to fuel system	Check if cracks are found on pipe or connector and pipe is securely fixed
	Poor function of carburetor.	Air leak from carburetor. Incorrect carburetor adjustment. Bad diaphragm in carburetor. Incorrect carburetor valve hinge height adjustment.
	Electrical System	
	Bad spark plug.	Replace.
	Bad ignition coil.	Replace.

Problem	Possible Cause	Remedy
Engine Overheats.	Wrong selection of spark plug	Replace. Use recommended parts only.
	Clogged cylinder with dirt.	Clean up.
	Clogged cooling duct with dirt.	Clean up.
Anvil does not rotate.	Worn out of drum shoe on clutch arm,	Replace.
Output power reduced.	Dirty air cleaner element.	Clean up.
	Carbon deposits in muffler, exhaust port on cylinder.	Clean up.
	Poor cylinder pressure due to worn out of piston, piston ring, cylinder.	Replace.
	Worn out anvil.	Replace.
	Carbon stuck on spark arrester.	Remove carbon on spark arrester.

Maintenance

It is highly recommended to practice regular check-ups and maintenance in accordance with the usage frequency to keep your tool in better condition and reduces total running costs.

Maintenance should be performed only by those who have read and understood the instruction manual for this product. For repairs, contact your dealer.

Engine Maintenance

REGULAR SERVICE PERIOD (3) Perform at every indicated month or operating hour interval, whichever comes first.		Before each use	First month or 10 hrs.	Every 3 months or 25 hrs.	Every 6 months or 50 hrs.	Every year or 100 hrs.	Every 2 years or 300 hrs.
ITEM							
Engine oil	Check level	o (6)					
	Change		o		o		
Air cleaner	Check	o (6)					
	Clean			o (1)			
	Replace					o (5)	
Spark plug	Check-adjust					o	
	Replace						o
Timing belt	Check	After every 300 hrs. (2) (4)					
Spark arrester (Applicable types)	Clean					o	
Exhaust filter (Applicable types)	Clean					o	
Engine cooling fins	Check-clean				o		
Nuts, bolts, fasteners (Retighten if necessary)	Check	o					
Clutch shoes	Check				o (2)		
Idle speed	Check-adjust					o (2)	
Valve clearance	Check-adjust					o (2)	
Combustion chamber	Clean	After every 300 Hrs. (2)					
Fuel filter and Fuel tank	Clean					o	
Fuel tubes	Check	Every 2 years (Replace if necessary) (2)					
Oil tube	Check	Every 2 years (Replace if necessary) (2)					

1. Reduce the service period when used in bad conditions such as dusty areas.
2. Items should be serviced by RRP unless you have proper tools and proficient mechanic.
3. Log operation hours to determine proper maintenance intervals.
4. Check for cracks and abnormal wear-out on the belt. Replace if abnormal.
5. Replace paper air filter element.
6. Clean or replace when looks dirty.

Maintenance Safety

Make sure the engine is off before beginning any maintenance or repairs. To prevent any unwanted startups, disconnect the spark plug cap. This will eliminate several potential hazards.

Read instructions before starting and make sure you have the tools and skills required.

To reduce the possibility of fire or explosion, be careful when working around gasoline. Use only non-flammable solvents, not gasoline, to clean parts.

Keep cigarettes, sparks, and flames away from all fuel related parts.

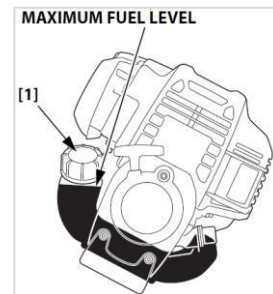
Fuel Level Check

Check the fuel level visually from the outside of the fuel tank while keeping the fuel filler neck upright.

If the fuel level is low, refuel in a well-ventilated area with the engine stopped. If the engine has been running, allow it to cool.

1. Remove the fuel filter cap and fill the tank with gasoline to the bottom of the filler neck.
2. Refuel carefully to avoid spilling fuel. Do not overfill.
3. There should be no fuel in the filler neck. After refueling, tighten the fuel filler cap securely.

Note: Spilled fuel is not only a fire hazard, but it also causes environmental damage. Wipe up spills immediately.



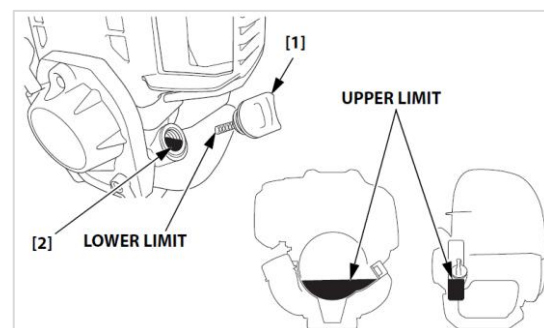
Oil Level Check

Check the engine oil level before each use or every 10 hours if operated continuously.

1. Remove the oil filler cap/dipstick and wipe it clean.
2. Insert and remove the oil filler cap/dipstick without screwing it into the oil filler neck then remove it to check the oil level shown on the dipstick.
3. If the oil level is near or below the lower limit mark on the dipstick, fill to the bottom edge of the oil fill hole with the recommended oil.

To avoid overfilling or underfilling, be sure the engine is in a level position while adding oil.

4. Reinstall the oil filler cap/dipstick and tighten securely.



Oil Change

1. Drain the used oil with the engine is warm. Warm oil drains quickly and completely.
2. Check that the fuel filler cap is tightened securely.
3. Place a suitable container below the engine to catch the used oil.
4. Remove the oil filler cap/dipstick and drain the oil into the container by tipping the engine toward the oil filler neck.

Note: Dispose of used motor oil in a manner that is compatible with the environment. It is recommended to take used oil in a sealed container to your local recycling center or service station for reclamation. Do not throw used oil in the trash, pour it on the ground or pour it down the drain.

5. With the engine in a level position, fill the bottom edge of the oil fill hoke with the recommended oil.
6. Reinstall the oil filler cap/dipstick securely. If any oil is spilled, wipe it up immediately.

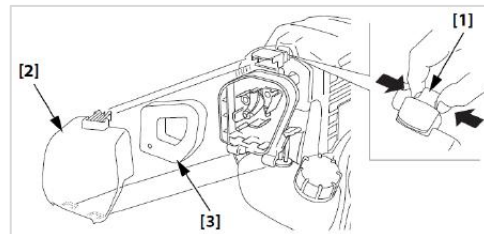
Note: Running the engine with a low or excessive oil level can cause engine damage.

Air Cleaner

A dirty air cleaner will restrict air flow to the carburetor, reducing engine performance. If the engine is operated in dusty areas, clean the air filter element more often than specified in the Maintenance Schedule.

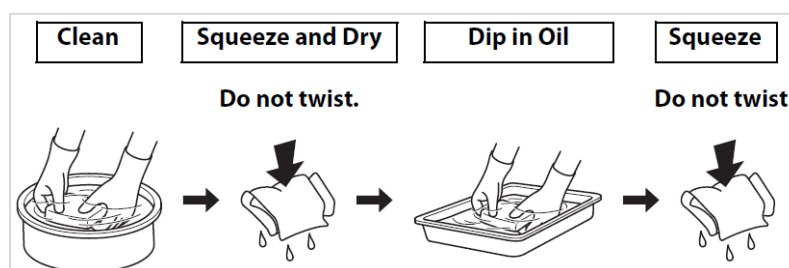
Inspection (Foam Air Filter Element)

1. Press the latch tab [1] on the top of the air cleaner cover and remove the cover [2].
2. Inspect the air filter element [3].
3. Clean or replace the dirty air filter element. Always replace a damaged air filter element.



Cleaning (Foam Air Filter Element)

1. Clean the filter element in warm soapy water, rinse, and allow to dry thoroughly. Or clean in a non-flammable solvent and allow to dry.
2. Dip the element in clean engine oil, then squeeze out all the excess oil. The engine will smoke when started if too much oil is left in the element.
3. Wipe dirt from the air cleaner body and cover, using a moist rag. Be careful to prevent dirt from entering the carburetor.
4. Reinstall the filter element and air cleaner cover securely.



Spark Plug

Recommended spark plug: CM5H (CMR5H (NGK))

Note: Incorrect spark plug can cause engine damage.

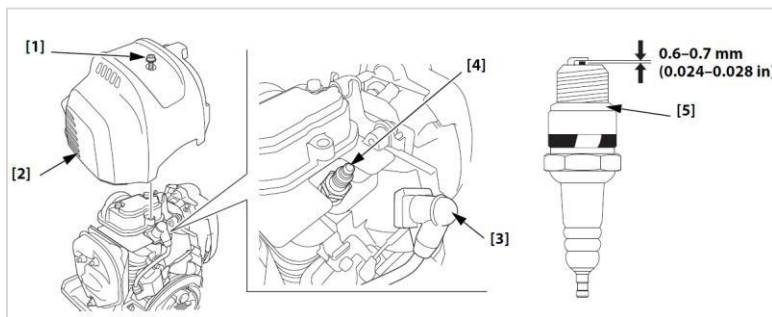
For good performance, the spark plug must be properly gapped and free of deposits.

1. Loosen the hex bolt [1] with a hexagon wrench, then remove the top cover [2].
2. Disconnect the spark plug cap [3] and remove any dirt from around the spark plug area.
3. Remove the spark plug [4] with a 5/8-inch spark plug wrench.
4. Inspect the spark plug. Reduce it if damaged or badly fouled, if the sealing washer [5] is in poor condition, or if the electrode is worn.
5. Measure the spark plug electrode gap with a wire-type feeler gauge. Correct the gap. The gap should be: 0.6-0.7 mm (0.024-.028 in).
6. Install the spark plug carefully, by hand to avoid cross-threading.
7. After the spark plug is seated, tighten with a 5/8-inch spark plug wrench to compress the sealing washer.

When installing a new spark plug, tighten 1/8 -1/4 turn after spark plug seats to compress the washer.

Torque: 11.8 N-m (9 lbf-ft)

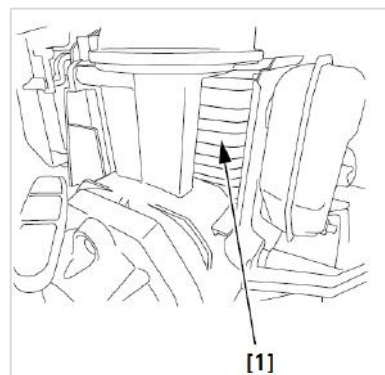
8. Attach the spark plug cap to the spark plug.
9. Install the top cover and tighten the hex bolt securely with a hexagon wrench.



Cooling Fins

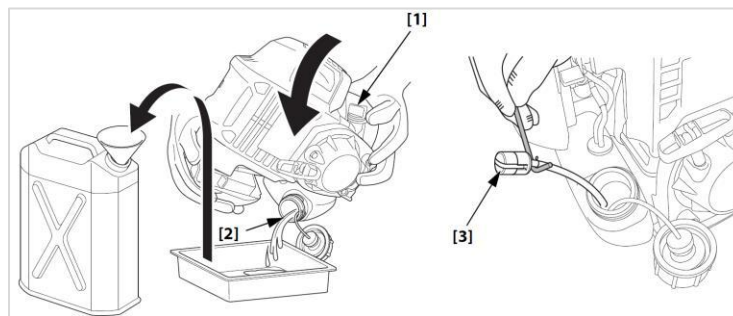
Inspect and Clean

1. Loosen the hex bolt and then remove the top cover.
2. Disconnect the spark plug cap.
3. Inspect the engine cooling fins [1] and clean out debris if necessary.
4. Reconnect the spark plug cap.
5. Install the top cover and tighten the hex bolt securely.



Fuel Filter Inspection and Fuel Tank Cleaning

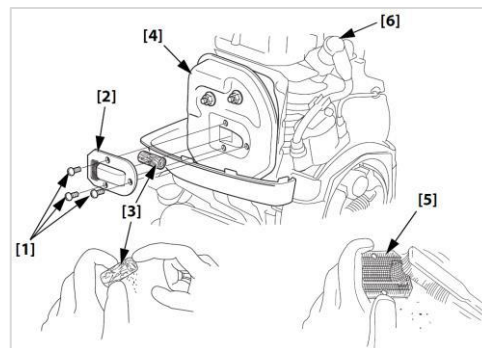
1. Check that the engine oil filler cap/dipstick [1] is tightened securely.
2. Remove the fuel filler cap.
3. Drain the fuel filler neck by hooking the black fuel tube with a piece of wire.
4. Inspect the fuel filter. If the fuel filter is dirty, gently wash it with non-flammable or high flash point solvent. If the fuel filter is excessively dirty, replace it.
5. Remove water and dirt from the fuel tank by rinsing the inside of the fuel tank with non-flammable or high flash point solvent.
6. Insert the fuel filter into the fuel tank and tighten the fuel filler cap securely.



Spark Arrester

Removal

1. Loosen the hex bolt and then remove the top cover.
2. Remove the self-tapping screws [1] from the spark arrester [2] and remove the spark arrester and exhaust filter [3] from the muffler [4].



Exhaust Filter Cleaning and Inspection

1. Pinch the exhaust filter and strike it lightly with a finger to remove carbon deposits.
2. Be careful not to strike it too hard. The exhaust filter must be free of breaks and holes.

Spark Arrester Cleaning and Inspection

1. Use a brush to remove carbon deposits from the spark arrester screen [5]. Be careful to avoid damaging the screen.
2. The spark arrester must be free of breaks and holes. Replace the spark arrester if it is damaged.
3. Install the exhaust filter and spark arrester in the reverse order of the disassembly.
Note, the spark arrester's outlet must point to the side opposite of the spark plug [6].
4. Install the top cover and tighten the hex bolt securely.

Product Inspection Range

When performing the inspection, make sure the engine is stopped and empty. The durability of parts differs depending on the frequency of use.

When the impact or rotation sound is abnormal (the impact rhythm is different, the work efficiency is reduced, the vibration is large, etc.) request inspection and repair.

Anvil (Drive at the Tip)

Wear out: Reduce performance and efficiency. Recommend early replacement.

Cracks. There is a risk of breakage. Stop using and request a repair.

Bolts

Make sure all the bolts are tightened.

Impact Mechanism

When the contact places of **the anvil and hammer** become worn-out and dull by percussion, the tool will have reduced power. This will cause a longer percussion than normal condition, causing early damage and broken parts.

1. Empty all oil in the gear box and completely remove the hammer housing.
2. Check the degree of wear on the anvil and hammer at least once every month.
3. Apply grease around the contact areas.

Fuel Pipe

Check that the fuel pipe is not twisted or broken. If broken, replace immediately.

Leakage of Fuel or Oil

Engine: If fuel leakage is confirmed, it may cause an accident or malfunction. Stop using immediately, check the engine, and request repair if necessary.

Main unit: If an oil leak is confirmed, it may cause an accident or breakdown. Stop using immediately, check the unit, and request repair if necessary.

Socket

Wear out of square part: It may cause performance degradation and fall off from the anvil.

Worn pinholes: Cannot be fixed and may fall off the anvil.

Cracks: There is a risk of breakage and scattering. Stop using and replace with a new one.

Throttle Lever

When pulling the throttle lever, check that there is no abnormality in pulling or returning.

Storage

Damaged parts should be repaired before storage.

1. Clean each part and coat other areas that may rust with a light film of oil.
2. If storing over three weeks:
 - Drain the fuel from the fuel tank.
 - Run the engine without load until the engine stops and exhaust all the remaining fuel in the carburetor.

Section 4: Parts and Service Support

Technical Support & Service

Telephone and web-based technical support is available for current production models through our Customer Service Department. Service Manuals and limited technical support may be available for models that are no longer in production.

Telephone and E-mail Technical Support

Telephone and e-mail technical support is available on normal U.S. business days from 8:00 AM to 5:00 PM U.S. Central Time Zone (GMT +6 (+5 Daylight Savings Time)).

Phone: (262) 637-9681

Email: custserv@racinerailroad.com

Racine Railroad Products
1955 Norwood Court
Mount Pleasant, WI 53403

Non-Warranty Technical Support

Depending upon the circumstances and availability of technical service personnel, we may provide technical assistance and/or field service support, *at the customer's expense*, to assist in the correction of non-warranty related problems. Contact our Customer Service Department to coordinate Non-Warranty Technical or Field Service Support.

Warranty Support Technical Support

Depending upon the circumstances and availability of technical service personnel, we may provide technical assistance and/or field service support, *at no charge to the customer*, to assist in the correction of warranty related problems. Contact our Customer Service Department to coordinate Warranty Technical or Field Service Support.

Warranty Parts Claims

Material claimed to be defective must be returned to our factory for evaluation. Defective materials will be replaced, or your account will be credited if replacement materials have already been purchased. Please contact our Customer Service Department at the address provided below if you have any questions or problems.

Warranty Service Support

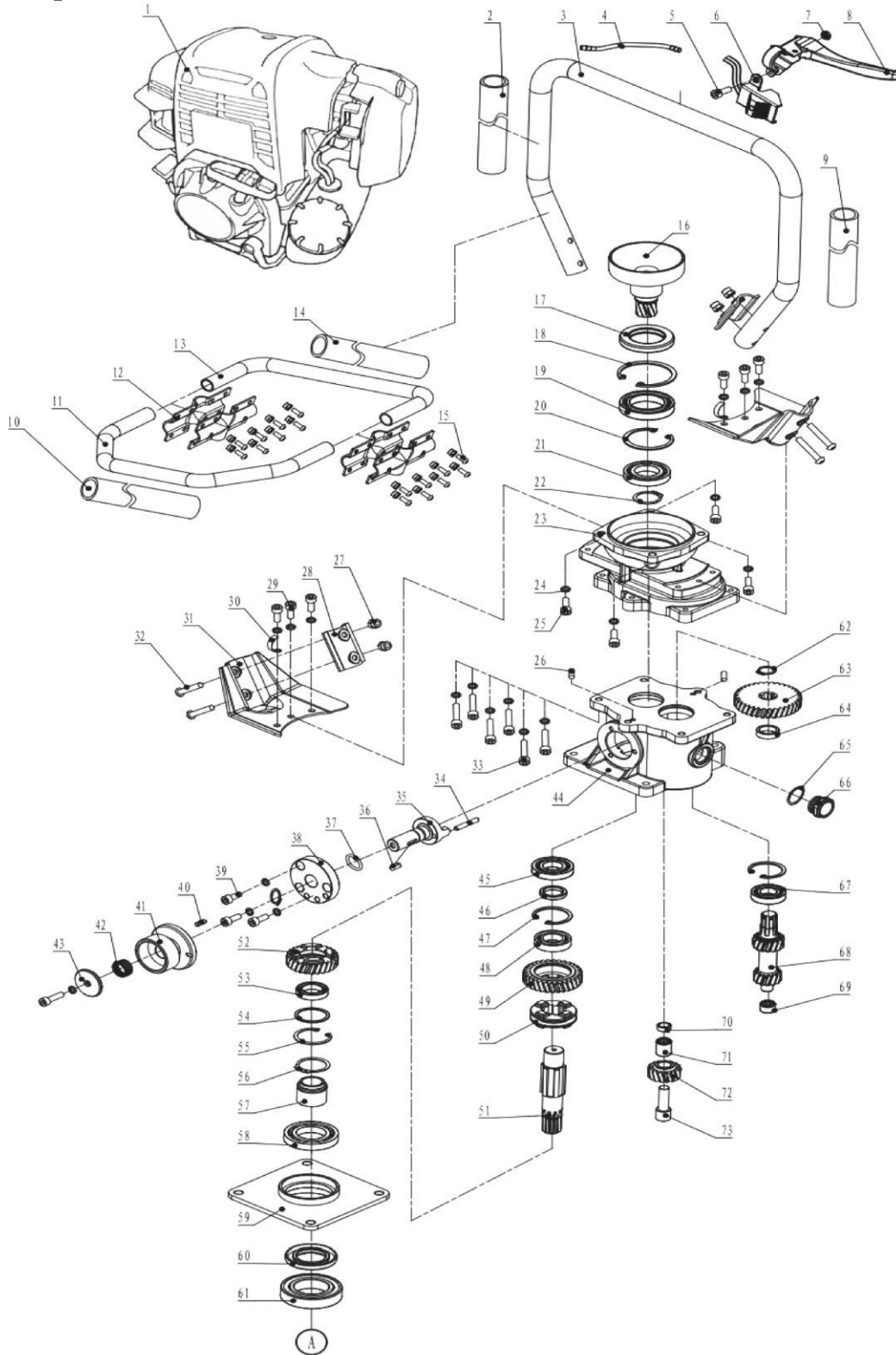
Depending upon the circumstances and availability of technical service personnel, we may provide technical assistance and/or field service support, at no charge to the customer, to assist in the correction of warranty related problems. Contact our Customer Service Department at the address provided above to coordinate Warranty Service Support.

The Customer Service Department at the address provided above to coordinate Warranty Service Support.

Service Parts

NO.	QTY	DESCRIPTION	PART NO.
5	REF	PLUG, SPARK	476645
10	REF	CARBURETOR	476642
14	REF	ELEMENT, AIR FILTER	476649
15	REF	LID, AIR FILTER	476643
20	REF	TANK, FUEL	476648
24	REF	STARTER	476644

Motor Exploded View



Wrench Exploded View

