CAUTION — Always follow rules for safe operation.
WARNING — Read Operator's Manual Completely Before Operating.

Dingo®

DEUCE

Operator's Manual

WARNING — THIS MANUAL IS AN OPERATOR'S MANUAL ONLY AND IS NOT INTENDED TO BE A REPAIR MANUAL.

THIS VEHICLE IS FOR OFF-ROAD USE ONLY

WARNING — READ ENGINE OWNER'S MANUAL, VEHICLE OPERATOR'S MANUAL, AND SUPPLEMENT CAREFULLY BEFORE OPERATING VEHICLE.

BEFORE OPERATING THIS VEHICLE, THE OWNER AND/OR OPERATOR MUST UNDERSTAND THAT THIS VEHICLE WAS NOT DESIGNED OR MANUFACTURED TO MEET SPECIFICATIONS FOR USE ON PUBLIC ROADS, STREETS, HIGHWAYS, AND THOROUGHFARES AND HAVE READ AND HAVE AN UNDERSTANDING OF ALL THE INSTRUCTIONS FOR SAFE ASSEMBLY AND OPERATION, AS WELL AS THE INSTRUCTIONS CONCERNING THE ENGINE AND ALL OTHER PORTIONS OF THE VEHICLE.

THIS SYMBOL POINTS OUT IMPORTANT SAFETY INSTRUCTIONS WHICH IF NOT FOLLOWED COULD ENDANGER THE PERSONAL SAFETY OF OPERATOR AND OTHERS. READ AND FOLLOW ALL INSTRUCTIONS IN THIS MANUAL AS WELL AS THE ENGINE MANUAL BEFORE ATTEMPTING TO OPERATE THIS VEHICLE.

WARNING: **INDICATES A STRONG POSSIBILITY OF SEVERE PERSONAL INJURY OR LOSS OF LIFE IF INSTRUCTION IS NOT FOLLOWED.**

CAUTION: **INDICATES A POSSIBILITY OF PERSONAL INJURY OR EQUIPMENT DAMAGE IF INSTRUCTION IS NOT FOLLOWED.**

IMPORTANT RULES FOR SAFE OPERATION

1. WARNING — This vehicle is not licensable. It is not to be operated on any public road, street, highway, sidewalk, or alley. To do so would be in violation of local law. This vehicle may be operated only on private property and upon areas approved by local law.
2. WARNING — Always perform a pre-ride inspection as described on Page 7.
3. WARNING — This vehicle should never be run indoors as the exhaust from the engine contains carbon monoxide, which is a tasteless, odorless, poisonous gas.
4. WARNING — Unless otherwise specified in this Operator's Manual, all screws, nuts, and bolts must be kept tight to ensure that the vehicle is in safe operating condition. The engine must be kept free of all dirt and other accumulations, paying particular attention to throttle linkage area.
5. WARNING — Prevailing-Torque-type locknuts lose their locking capability with repeated use and require replacement. Ensure locknuts are functioning properly. (See MAINTENANCE — LOCKNUTS)
6. WARNING — The tire pressure should be checked prior to each use. The inflation pressure is the tire pressure printed on the tire pressure decal. Improper tire pressure may cause instability and may prevent proper braking or steering.
7. WARNING — Modification of this vehicle or removal of original equipment or safety decals may render the vehicle unsafe or illegal.
8. WARNING — The vehicle should never be started without first checking to see that the throttle is in idle position and parking brake set, if equipped.
9. WARNING — This vehicle is not designed or intended for racing, any form of competition, or use on rental tracks.
10. WARNING — Never attempt to start this vehicle without having the operator in a proper position. (See OPERATING INSTRUCTIONS on Page 8)
11. WARNING — The operator's ability to operate this off-road vehicle (ORV) safely is largely dependent upon the operator's ability to exercise proper judgement. An operator also must not be too small or too large for controlled operation. The operator must be of sufficient age, understanding, mental capacity, and physical capability to safely operate this vehicle. This vehicle should only be operated after mature, supervised instruction and sufficient practice in open areas.
12. WARNING — This vehicle is designed for an operator and one passenger only. — NO ADDITIONAL PASSENGERS.
13. WARNING — The operator and passenger of this vehicle should always wear properly fitting helmets approved by agencies such as the Department of Transportation (DOT), Safety Helmet Council of America (SHCA), or Snell Memorial Foundation (SNELL). Most ORV accident fatalities are due to head injuries. The operator and passenger should also wear face shields or goggles, boots, gloves, and other appropriate protective clothing. (See OPERATING INSTRUCTIONS on Page 8)
14. WARNING — The guards and covers must be kept in place at all times. The covers and guards over the brakes, drive sprockets, and torque converter prevent mud and debris from coming in contact with these components as well as preventing accidental contact by the operator, passenger, or service personnel while the vehicle is running.
15. WARNING — Loose clothing, long hair, or articles worn by an operator must be controlled, or covered to prevent them from possibly being caught in rotating parts of the vehicle or the surrounding environment while riding.
16. WARNING — No one should ever place hands, feet, or any other part of the body or clothing near the engine, wheels, chain, and other rotating parts of the vehicle while riding or running the engine. Caution must be used in performing required maintenance on or near an operating engine. Special caution should be taken after the engine has been running, since the engine and other drive components may be extremely hot.
17. WARNING — Wet, slippery, rough, or steep terrain is potentially dangerous and may result in injury if proper caution is not observed. Slow speeds are required to safely operate this vehicle under those conditions. The operator must use mature judgement, skill, and experience to choose a speed suitable for the terrain and riding conditions.
18. WARNING — The Governor settings for this vehicle's engine must not be tampered with, altered, or changed. The Governor is set by the engine manufacturer and limits the maximum speed of the engine (and vehicle) and protects the engine from damage. Excessive speeds are potentially dangerous to the rider and the engine.
19. WARNING — Each time before using this vehicle, the fuel supply should be checked. The fuel tank should never be filled while the engine is running or while the engine is hot. Do not overfill the tank. Always allow at least 1/4 inch of space at the top of the tank for expansion. There should not be any fuel in the filler neck. Replace cap tightly to prevent spillage of fuel which may create a fire hazard. (See GENERAL ASSEMBLY INSTRUCTIONS on Page 4)
20. WARNING — Never try to adjust, repair, or clean the vehicle while in motion.
21. WARNING — If the Vehicle should start making unusual noise or vibrating abnormally, the engine should be stopped and the spark plug wire disconnected. The vehicle should then be checked for damage. Excessive noise or vibration is generally a warning of loose or worn parts.
22. WARNING — Always slow down when turning. High speed turning may cause loss of control, possible turnover of the vehicle, and/or possible injury to operator.
23. WARNING — When turning on pavement, slow down, because the knobby tires supplied on the vehicle may reduce control. ALWAYS SLOW DOWN! See WARNING 22.
24. WARNING — Do not race, jump, perform "stunt" riding, or "spin-outs" when operating the vehicle. The vehicle is not designed or intended for such operation. See WARNING 22.
25. WARNING — This manual provides guidelines for the assembly, maintenance, and operation of this vehicle and is not intended as a service manual.
26. WARNING — Assembly, maintenance, and/or repair of this vehicle should only be performed by persons of sufficient mechanical skill, experience, and judgement (such as outdoor power equipment or small engine dealers) so that no unsafe conditions or modifications are made. NOTE: THIS IS NOT A REPAIR MANUAL.
27. WARNING — Alway use extreme caution when starting or re-starting the engine. Avoid touching the engine, muffler, or drive components as these areas could cause burns on contact.
28. WARNING — When towing a trailer, speed must be reduced to allow for increased stopping distances and increased turning radius required as a result of reduced weight on the front tires. Also, care must be taken to prevent the trailer from coming in contact with the rear of the vehicle or rear tires which may result in damage to the vehicle and possible personal injury. The maximum trailer weight including load must not exceed 500 pounds with a maximum tongue weight of 50 pounds. (See OPERATING INSTRUCTIONS on Page 8)
29. WARNING — The battery contains sulfuric acid and must not come in contact with skin, eyes, or clothing since this will cause severe burns possibly causing disfigurement. Also, battery may generate explosive gases and must not be exposed to sparks, flame, cigarettes, or anything flammable or an explosion may result causing severe injury.
30. WARNING — Safety decals must be replaced if they become illegible or become detached from the vehicle. If they are illegible or missing, adequate warning of potential hazards or safety requirements may be lacking. This could result in the operator and/or passenger not taking the proper safety precautions.

31. WARNING — Welding this unit will cause failure of the magneto in the engine, brake cable, and throttle cable if the ground cable from the welder is not located properly (see MAINTENANCE-WELDING on page 14 for location.) on the frame of the vehicle. NOTE: COMPOSITE BEARINGS ARE USED TO CONNECT THE POWER PLATFORM AND FRONT SWING ARMS TO THE MAIN FRAME WHICH ISOLATE THESE UNITS FROM THE MAIN FRAME CAUSING THE CURRENT PATH TO BE THROUGH THE ENGINE, BRAKE CABLE, AND THROTTLE CABLE. (SEE MAINTENANCE SECTION FOR MORE DETAIL.)

32. WARNING — Operation in water or washing of the vehicle during freezing temperatures can result in water getting into the throttle cable conduit and/or on the throttle mechanism and freezing. This may result in the throttle sticking which may cause the engine to run at full speed. NOTE: CHECK THROTTLE PERIODICALLY DURING OPERATION IN A WET ENVIRONMENT DURING FREEZING TEMPERATURES TO ENSURE THAT ICE IS NOT BUILDING UP IN THE THROTTLE CABLE OR THROTTLE MECHANISM. ALSO, ENSURE THAT THE THROTTLE CABLE AND THROTTLE MECHANISM ARE FREE OF WATER AFTER WASHING IF THE VEHICLE IS TO BE OPERATED IN FREEZING TEMPERATURES.

33. WARNING — Operation of the vehicle in mud can result in mud getting into the throttle cable conduit and/or on the throttle mechanism and binding up the cable and/or the throttle mechanism. This may result in the throttle sticking which may cause the engine to run at full speed. NOTE: CHECK THROTTLE PERIODICALLY DURING OPERATION IN A MUDDY ENVIRONMENT TO ENSURE THAT MUD IS NOT BUILDING UP IN THE THROTTLE CABLE OR THROTTLE MECHANISM. ALSO, ENSURE THAT THE THROTTLE CABLE AND THROTTLE MECHANISM ARE FREE OF MUD.

34. WARNING — Ensure that seat belts and harnesses are properly adjusted and fastened at all times. If the belts and harnesses are not being worn by the operator and/or passenger movement in the passenger compartment may occur resulting in loss of control and possible vehicle damage and/or personal injury.

35. WARNING — Ensure that passenger's seat belt and harness are secured when not in use.

36. CAUTION — The engine should be stopped when the vehicle is not in use.

37. CAUTION — When making repairs or adjustments to the vehicle which do not involve adjustments to the engine, the spark plug wire must be disconnected and kept away from the spark plug to prevent accidental starting. When working on or around, or when restarting engine, use extreme caution to avoid contact with the muffler, cylinder head, or any other potentially hot area on or around the engine.

38. CAUTION — When storing the vehicle, it must be kept in a place where gasoline fumes will not reach an open flame or spark. For long periods of storage, such as for winter the fuel tank should be drained in an open, cool area. (See STORAGE on Page 14.) The engine must be allowed to cool before storage in any enclosure.

39. CAUTION — Read and keep all printed material supplied with this vehicle. Timely and specific instructions and Operator's Manual revisions are included in supplements. If any printed material included is unclear, contact your dealer for assistance. NOTE: THIS IS NOT A REPAIR MANUAL.

40. CAUTION — The Custom Bars assembled to this vehicle are for limited roll over protection and limited brush protection. They were not designed for roll over without deformation or to restrict brush or tree branches from protruding into the passenger compartment.

41. CAUTION — Never operate this vehicle while under the influence of alcohol, drugs, or medication of any kind. Such operation could be dangerous to yourself and/or others.

THIS VEHICLE IS SOLD FOR OFF ROAD USE ONLY. BEFORE OPERATING THIS VEHICLE, READ ALL THE INTRUCTIONS FOR SAFE ASSEMBLY AND OPERATION AS WELL AS THE INSTRUCTIONS COVERING THE ENGINE AND OTHER PORTIONS OF THIS VEHICLE.

TABLE OF CONTENTS

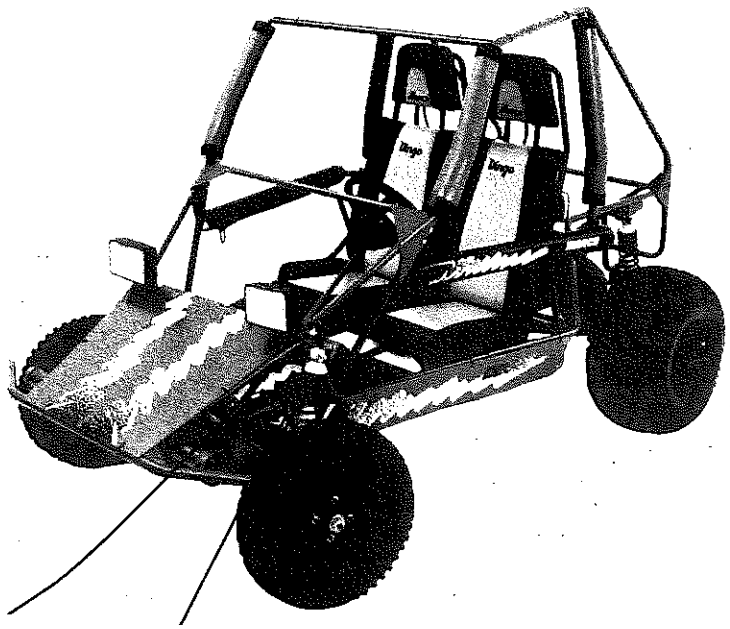


FIGURE 1

WARNING — READ OPERATOR'S MANUAL COMPLETELY BEFORE OPERATING.

ASSEMBLY

(SEE SEPARATE SHEET FOR DETAILED ASSEMBLY INSTRUCTIONS)

TOOLS REQUIRED:
(1) UTILITY KNIFE
(1) GREASE GUN
(1) 10 MM OPEN END, 10 MM COMBINATION OPEN-BOX END, OR #3 PHILLIPS SCREW DRIVER
(1) TIRE PRESSURE GAUGE
(2) 7/16 OPEN END, 7/16 COMBINATION OPEN-BOX END, OR 7/16 SOCKET
(1) 1-1/8 SOCKET

All reference numbers specified in these assembly instructions will be found in the appropriate Operator's Manual Supplement.

ASSEMBLY INSTRUCTIONS

608-01 ENGINE OIL

1. Remove oil fill plug (see Figure 2) and, with the vehicle on level ground, fill the crank case until the oil reaches the threads in the fill hole neck, approximately 1-1/4 pints. Use a good grade of oil as recommended in the Briggs & Stratton Engine Operating and Maintenance Instructions. Replace and securely tighten fill plug.

609-01 ENGINE OIL

1. Remove oil dipstick (See Fig. 2) and with the vehicle setting on level ground, fill the crankcase to the FULL mark on the dipstick, approximately 2.5 pints. Use a good grade of oil as recommended in the Briggs & Stratton Engine Operating and Maintenance Instructions.

611-01 ENGINE OIL

1. Remove oil dipstick (See Fig. 2) and with the vehicle setting on level ground, fill the crankcase to the FULL mark on the dipstick, approximately 3 pints. Use a good grade of oil as recommended in the Briggs & Stratton Engine Operating and Maintenance Instructions.

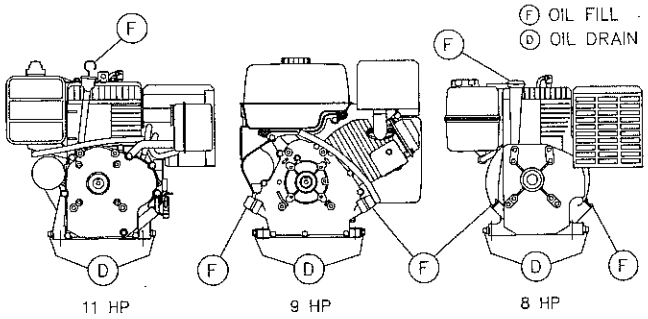


FIGURE 2

BATTERY (609-00 & 611-00 ONLY)

1. Remove the Wing Nuts (P.N. 9468) (Ref. 100) and lift off the Battery Clamp Bar (P.N. 6302-2) (Ref. 99).
2. Remove Battery (P.N. 3633) (Ref. 97) from vehicle.
3. Remove Vent Plugs and short sealing tube on the vent elbow. **NOTE:** See Battery "FILLING AND INSTALLATION INSTRUCTIONS" for additional information.
4. Cut Battery Vent Hose (P.N. 6520) (Ref. 101) so that is is a minimum of 13 inches long (the vent hose can be left longer) and attach vent hose to the vent elbow.

WARNING — Prevent the electrolyte from coming into contact with skin, eyes, and clothing. Contact with skin or eyes will result in severe burns and contact with clothing may decompose the material. If contact is made, flush immediately with water.

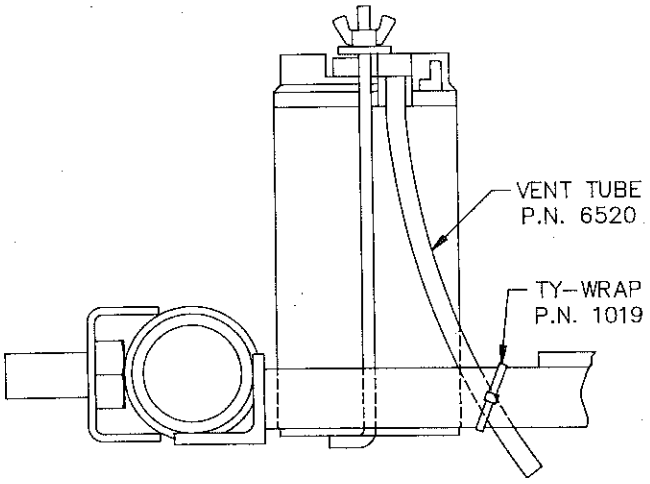
5. Fill Battery with electrolyte (diluted sulfuric acid of a SPECIFIC GRAVITY of 1.265). **NOTE:** Fill to upper level as indicated on battery.

WARNING — Battery may generate explosive gases after filled with acid and during charging or use. Keep sparks, flame, cigarettes, or anything flammable away. Ventilate when charging or using battery in an enclosed space, and ensure that the battery vent path is always open.

6. Charge the battery for approximately 3-5 hours at 1/10 the rated capacity of the battery if using a constant current charger. If a variable rate charger is used, an overnight charge is highly recommended. If using a small trickle charger, a charging period of 24 hours may be necessary.
7. Reinstall battery in vehicle using the reverse order in Step 1 and complete installation by following steps 8 & 9 below.

WARNING — Failure to attach vent hose properly to battery and frame could result in discharge of acid potentially causing severe burns.

8. Attach the vent hose to frame as shown in Figure 3 using a Tywrap (P.N. 1019).



NOTE:
KEEP VENT TUBE FREE OF KINKS AND OBSTRUCTIONS.
INSTALL TY-WRAP IN A MANNER THAT IS SNUG, BUT DOES NOT COLLAPSE THE TUBE.

FIGURE 3

9. Connect the battery cables to the battery using the Battery Cable Mounting Hardware Pack (P.N. 6521) (Ref. 167). First, connect the red cable to the positive terminal and then connect the black cables to the

negative terminal. NOTE: Always connect the "POSITIVE" cable before connecting the "NEGATIVE" cables. Apply petroleum jelly or other corrosion prevention material on the nuts and bolts prior to cable installation to prevent terminal/cable and hardware corrosion.

GASOLINE

1. Fill the fuel tank with clean, fresh, lead-free gasoline. DO NOT use gasohol, diesel fuel, or gasoline mixed with oil. Use gasoline as recommended in the Engine Operating and Maintenance Instructions. (See WARNING #19 on page 2)

WARNING — Do not fill fuel tank in a closed area such as a garage. After filling the tank move the vehicle at least 15 feet away before starting. Do not fill fuel tank to the point of overflowing. Allow at least 1/4 inch of tank space for fuel expansion.

TIRES

WARNING — The tires shipped with this vehicle have pressures exceeding the recommended to accommodate assembly and pressure reductions resulting from storage and shipping.

1. Remove the valve caps and adjust the tire pressures to the pressure shown on the tire pressure decal.

WARNING — The tire pressure must be maintained at the pressure printed on the tire pressure decal. Failure to maintain proper tire pressure may cause instability and prevent proper braking and steering.

CHASSIS LUBRICATION

NOTE: This vehicle was not lubricated at the factory and must be lubricated prior to use.

1. Lubricate the following items with several drops of oil as shown in Figure 4; steering bearing points, tie rod ends, brake rod pivot points, pedal pivot points, door hinges, door latch, and parking brake handle. Use the same grade of lubricating oil used in the engine crankcase.
2. Grease the spindles with a general purpose grease using a standard grease gun. Grease should be added until it is coming out of the ends of the spindles. Wipe off excess grease. See Fig. 5. **NOTE:** Keep area clean and free of dirt.

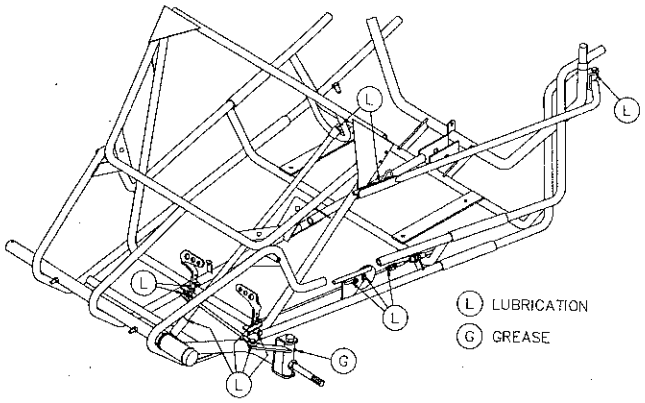


FIGURE 4

STEERING WHEEL AND WHEEL HUB MOUNTING HARDWARE

1. Inspect the steering wheel mounting hardware to ensure that it is tight. The steering wheel has 2 bolts in it, one is a bolt that goes all the way through the steering wheel and column with a nut on it, which is the steering wheel mounting bolt and the other acts as a set screw. Tighten the steering wheel mounting hardware until it is snug, but not deforming the steering wheel, and tighten the set screw until the steering wheel is snug on the column.
2. Tighten all wheel hub and axle mounting hardware as needed. DO NOT OVERTIGHTEN FRONT AXLE NUTS. It is only necessary to tighten the nuts on the front axles so that the wheel hub turns freely on the axle with minimum end play. If the wheel does not turn freely, the nut is too tight, and can cause bearing damage. Tighten the rear axle nuts until there is no play between the axle and the wheel hubs.

WARNING — Failure to keep steering wheel and wheel hub mounting hardware tight could result in the steering wheel and wheels becoming loose or falling off. This could cause loss of control resulting in damage to the vehicle and serious injury.

OPERATION

OPERATING CONTROLS

WARNING — Do not attempt to start or operate this vehicle until you are completely familiar with the location and use of each control necessary to operate this vehicle. You must know how to stop this vehicle before you start it. Check the throttle assembly to ensure that it is working smoothly and returns to the idle positon when released. Check the braking system to ensure that it is working properly before starting the engine.

CAUTION: Always follow rules for safe operation on page 2.

BRAKE

NOTE: This vehicle is equipped with a disk brake system. The brake is controlled by the foot pedal (Left hand side). See FIG. 1.

A disk brake system clamps the brake pedals on the disk and slows or stops the vehicle as pressure is applied to the brake pedal.

WARNING — Before riding this vehicle, the effectiveness (SEE FOLLOWING BRAKE TEST) of the brake system must be ensured. Do not operate this vehicle unless the brake is working properly.

NOTE: Brake systems typically require a short break-in period to operate at full efficiency. Some wear on the pads will increase the coefficient of friction and improve effectiveness. That can be accomplished by making a series of gentle stops.

NOTE: Hard usage of the brakes without a break-in period can result in reduced life of the pads and decreased braking ability. Also, RIDING the brakes (brakes partially applied while applying the throttle) will result in reduced life of the pads and decreased braking ability. DO NOT apply pressure to the brake pedal while riding except for speed control or stopping.

PARKING BRAKE

This vehicle is equipped with a parking brake, which when applied actuates the braking system preventing the vehicle from moving. The parking brake should be used when the vehicle is to be started, parked without the engine running, or may be used when the engine is running if the operator is in the position to stop the vehicle if it starts to move.

WARNING — Never leave the vehicle unattended with the engine running since the vehicle may start to move and cause personal injury or property damage.

The parking brake is applied by pulling up on the lever or released by pushing down on the lever located to the left of the operator. The force required to pull up or push down on the lever may be reduced by first pushing down on the foot pedal, then pulling up or pushing down on the brake lever, and then releasing the foot pedal.

NOTE: Operating the vehicle with the parking brake applied will result in reduced life of the brake pads and decreased braking ability.

See MAINTENANCE-CHASSIS LUBRICATION for lubrication and MAINTENANCE-BRAKE SERVICE for adjustment.

BRAKE TEST

This test must be performed as part of the PRE-RIDE INSPECTION as described in the OPERATING INSTRUCTIONS.

Sit in the vehicle with the brake actuated by pressing on the brake pedal. Start the engine with the ignition switch on units that are equipped with electric start, or have an assistant start the engine with the starter rope. Increase the engine RPM gradually to ensure the brake is effective. Repeat test with brake pedal released and parking brake applied. If the brake does not hold the vehicle in either case, adjust as described in the section MAINTENANCE-BRAKE ADJUSTMENT. If proper brake performance cannot be achieved using the described adjustment procedure, contact your dealer for assistance.

THROTTLE

The throttle is controlled by the foot pedal (right hand side) which increases and decreases the engine speed. See Fig. 1. As the engine is increased in speed above idle, the torque converter assembly automatically engages and moves the vehicle forward. To disengage the torque converter at any time, allow the throttle to return to the idle position.

WARNING — Each time **PRIOR** to starting the engine, check the throttle assembly to ensure that when the pedal is pushed all the way forward the assembly is working and, when released, returns to the idle position. Do not operate if pedal and/or engine throttle linkage fail to return to the idle position. If unable to correct the problem through cleaning, adjustment, or replacement of worn parts, contact your dealer for assistance.

WARNING — Operation in water or washing of the vehicle during freezing temperatures can result in water getting into the throttle cable conduit and/or on the throttle mechanism and freezing. This may result in the throttle sticking which may cause the engine to run at full speed.

NOTE: CHECK THROTTLE PERIODICALLY DURING OPERATION IN A WET ENVIRONMENT DURING FREEZING TEMPERATURES TO ENSURE THAT ICE IS NOT BUILDING UP IN THE THROTTLE CABLE OR THROTTLE MECHANISM. ALSO, ENSURE THAT THE THROTTLE CABLE AND THROTTLE MECHANISM ARE FREE OF WATER AFTER WASHING IF THE VEHICLE IS TO BE OPERATED IN FREEZING TEMPERATURES. THE THROTTLE CABLE AND THROTTLE MECHANISM MAY BE DRIED OUT AND/OR THAWED OUT WITH A CONVENTIONAL HAIR DRYER OR ALLOWED TO SIT IN A WARM ENCLOSURE FOR ENOUGH TIME TO ALLOW THE THROTTLE SYSTEM TO DRY NATURALLY.

CHOKE

The choke control is located on the engine at the side of the carburetor and in the console (located to the right of the operator, containing the key start/stop switch and light switch) on units equipped with a remote choke. Refer to the ENGINE OWNER'S MANUAL for specific choke operation instructions.

ENGINE STOP SWITCH

This vehicle is equipped with a Remote Stop Switch mounted in the steering wheel.

WARNING — EVERY TIME PRIOR TO OPERATING THIS VEHICLE, TEST THE FUNCTION OF THE REMOTE STOP AND REPAIR IF FAULTY. DO NOT OPERATE THIS VEHICLE UNLESS THIS SWTCH IS FUNCTIONING PROPERLY. If you are unable to make repairs, contact your dealer for replacement parts or assistance.

ENGINE STOP SWITCH TEST

IMPORTANT — STOP SWITCH TEST

Set the Parking Brake before performing this test. While the engine is running, move the steering wheel Remote Stop Switch to the "OFF" position. If this does not stop the engine, utilize the Start-Stop switch in the console (if equipped), Stop Switch on the engine (if equipped), Key Stop Switch on the engine (if equipped), Shorting Clip at the spark plug, or move the Choke Control to the "CHOKE" position to stop the engine. Check to ensure that Yellow Wire of the Stop Switch is attached to the terminal on the engine (a male blade terminal located on the back of the engine, just above the throttle mechanism, or the terminal marked "M" on the Key Switch of the engine) and the other wire of the Stop Switch is attached to the steering wheel mounting bolt (See Wiring Diagram in the ENGINE SUPPLEMENT for more information on wiring). Move the Switch to the "ON" position, restart the engine, and then move the Switch to the "OFF" position. If the Switch will not stop the engine, contact your nearest dealer for replacement parts or assistance. NOTE: Do not operate this vehicle with a remote stop switch that is not functioning properly.

LIGHT SWITCH

The light switch is located on the front side of the Control Console immediately below the choke knob on units that are equipped with lights. The lights may be checked by simply turning the switch to the "ON" position and observing the lights. The battery must be installed, fully charged, and connected on the 9 HP model. The engine must be running on the 11 HP model. If the taillight and headlight are not working, remove and inspect the fuse, located immediately below in the control box. Remove the fuse by pulling the halves of fuse holder apart and removing the fuse from the receptacle. If the filament in the fuse is not intact, replace the fuse with a 10 amp fuse and recheck the lights. **NOTE:** If the fuse fails shortly after installation the wiring harness must be checked for shorts. If one of the taillights or headlights is not working install a new lamp and recheck. If the lighting system fails to operate, contact your dealer for replacement

parts or assistance. (See Wiring Diagram in the ENGINE SUPPLEMENT for more information on wiring)

CAUTION — Operating the Lights on the 9 HP model without the Battery installed or not properly filled and charged will result in the failure of the Lights and possibly damage the Engine Voltage Regulator.

DOORS

The door latches are located at the front of the doors. The doors are to be opened by pulling back on the door latches and swinging the doors out. The doors are to be closed by swinging the doors in toward the latch tubes on the frame, pulling back on the latch bolts, lining the latch bolts on the doors up with the latch tubes on the frame, and releasing the latch bolts.

WARNING — Keep doors closed at all times when operating vehicle. If the doors are not properly closed they may get caught in the surrounding environment resulting in possible vehicle damage or personal injury.

JACK

This vehicle is equipped with a jack which is to be used when raising the front or rear of the unit to complete initial assembly, change tires, or check the condition of axles and bearings.

Place the jack under the front of the vehicle or under the rear frame of the vehicle as shown in Figure 6, tighten the valve by rotating it clockwise with the jack handle, inserting the handle into the jack, and move the handle up and down until the front or rear of the unit is off the ground. Rotate the valve counterclockwise with the handle to lower the vehicle.

WARNING — Never place any part of the body under the vehicle or start the vehicle while it is on the jack. If the vehicle is to be started while the tires are off the ground, support the rear of the unit with a pair of suitable jack stands. If these instructions are not followed vehicle damage, property damage, or personal injury may result.

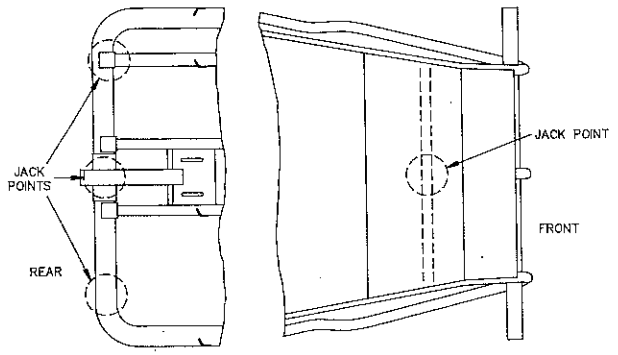


FIGURE 5

OPERATION

WARNING — Before operating this vehicle, be sure to read and follow all warnings, cautions, and instructions on preceding pages.

PRE-RIDE INSPECTION

WARNING — Perform this pre-ride inspection everyday before riding the vehicle. If not performed, serious damage to the vehicle or personal injury may result.

1. **ENGINE OIL LEVEL** — Add oil if required. Check for leaks. Tighten filler cap securely.
2. **FUEL LEVEL** — Add fuel as necessary. Do not overfill (no fuel in the filler neck). **Replace cap tightly.** Check for leaks. Do not mix oil with gas.

WARNING — Do not refill the fuel tank while the engine is hot because it is possible for spilled fuel to ingite resulting in a fire. Do not fill fuel tank in a closed area such as a garage. After filling the tank move the vehicle at least 15 feet away before starting.

3. BRAKES — Perform Brake Test as outlined in OPERATION-OPERATING CONTROLS. Adjust if necessary.
4. TIRES — Check condition and pressure (See #6 WARNING on Page 2).
5. DRIVE CHAIN — Check condition and tension.
6. THROTTLE — Check for smooth operation. Assure throttle "snaps" back to idle. Also, check for frayed cable or damaged cable conduit. If either condition exists replace the cable assembly before riding. Also check for mud and ice in the throttle cable and throttle mechanism. If mud or ice is present, clean out the mud and allow the ice to melt if present and dry the throttle mechanism and cable with a hair dryer.
7. STOP SWITCH — Perform stop switch test (See OPERATION-OPERATING CONTROLS). Repair as necessary.
8. ALL NUTS, BOLTS, and FASTENERS — Check wheels to see that all axle nuts and lug nuts are tightened properly (See MAINTENANCE-WHEEL INSTALLATION). Check and tighten as necessary all other fasteners to specified condition (See MAINTENANCE-LOCKNUTS).
9. GUARDS — Ensure all protective guards are in place before operating this vehicle.
10. TORQUE CONVERTER ASSEMBLY — Inspect to ensure the belt is loose on the drive pulleys. If the belt does not move freely see TORQUE CONVERTER MAINTENANCE section of MAINTENANCE.
11. STEERING SYSTEM — Ensure that it turns freely. If not see CHASSIS LUBRICATION section of MAINTENANCE.
12. WARNING DECALS — Ensure that all warning decals are legible and securely attached. If not see DECAL section of MAINTENANCE.
13. CORRECT any discrepancies according to the Operator's Manual before riding. If a problem cannot be corrected, contact an authorized Dealer for assistance.

WARNING — Always follow rules for safe operation: do not wear loose or flowing clothing, contain long hair, wear a properly fitting approved helmet, and wear goggles or face shield.

OPERATING INSTRUCTIONS

WARNING — Never operate this vehicle while under the influence of alcohol, drugs, or medication of any kind. Such operation could be dangerous to yourself and/or others.

1. Make sure Throttle is in the idle position. **NOTE:** Idle position is when throttle control on the engine is in normal position (with no tension applied) and the pedal is in the rear most position. The Throttle Cable should be adjusted to remove all slack, but not to

apply any tension to the throttle control on the engine.

2. Ensure that a properly functioning Parking Brake is engaged or the operator is properly seated in the vehicle with the Brake applied while starting the engine. A second person is required to start the engine when the Parking Brake is not used and the starter rope is used.
3. When starting a cold engine, move Choke Lever to "CHOKE" position or pull out on the Remote Choke Cable (if equipped). Once the engine is hot and is to be restarted, choking may not be necessary.
4. Place the Remote Stop Switch located on the Steering Wheel in the "ON" position and ensure that the engine mounted Key Switch or engine mounted Stop Switch is in the "ON" position.
5. Start the engine by turning the Key Start Switch (if equipped) in the Control Console to the start position or grasp recoil starter handle and pull quickly. Do not allow starter rope to snap back. The person starting the engine should be positioned completely behind all parts of the vehicle and have the trailer (if attached) unhooked.

NOTE: If the starter does not turn the engine when the start switch is in the start position on units equipped with electric start, check the charge in the battery and check for loose connections in the electrical system. See Engine Wiring Diagram. (When the battery is fully charged it will be 12 to 13 volts.)

WARNING — Avoid touching the engine, muffler, or drive components after the engine has been running as these areas could cause burns on contact.

WARNING — Failure of person starting engine to be positioned completely behind vehicle can result in injury as a result of vehicle movement. Always unhook the trailer prior to attempting to start the engine with the recoil starter to prevent injury as a result of vehicle movement.

CAUTION — Person starting the engine should note the direction of engine exhaust flow. Failure to keep clear of exhaust flow may cause skin and eye irritation.

NOTE: If engine does not start after two or three pulls of the starter rope or 10 seconds of starter operation, place choke control lever in the OFF position or push in the remote choke, pull starter rope or operate starter momentarily to clear excess fuel from cylinder, and attempt to start the engine. If the engine still does not start, wait a few minutes, then repeat steps 1 through 4. If the engine still fails to start, let the vehicle set for at least 15 minutes and try again. Continued pulling of the starter rope or starter operation will flood the engine and damage the starter motor. An engine that fails to start promptly is an indication of some malfunction or even errors in the starting procedure. If the engine fails to start, your nearest dealer should be contacted for assistance.

6. When the engine is started, test the function of the remote stop switch according to the STOP SWITCH TEST in this section.

WARNING — Do not operate the vehicle if the remote stop switch is not functional.

7. Operate the vehicle first in a large open space in order to learn to start and stop the vehicle properly. Until the operator has the "feel" of the vehicle, it should only be used slowly. **Avoid sharp turns, high speed, and rough terrain at all times when riding the vehicle.**

WARNING — Vehicle speed while turning is an important consideration in the safe operation of this vehicle. It is important to keep all four tires on the ground at all times. Generally, that can be achieved by decreasing speed proportionally to the sharpness of the turn. Also, vehicle speed must be reduced when driving from one surface to another (i.e. dirt to asphalt or concrete) since traction may increase or decrease and create instability while turning. For safe operation remember; "the sharper the turn, the slower the speed of the vehicle". Mature supervision of practice operation is required to coordinate that skill. Failure to operate this vehicle at a safe speed while turning will result in a strong possibility of severe injury or loss of life. Do not race, jump, or perform "stunt" riding.

WARNING — Do not operate vehicle in terrain containing large rocks, tree stumps, ravines, tall vegetation, brush, steep inclines, holes, roots, or hidden hazards.

WARNING — Goggles or face shield must be worn by the operator and passenger at all times when riding in brush or near trees with overhanging branches. Also, brush and branches that may protrude into the passenger compartment must be avoided or severe injury may result.

WARNING — Only experienced riders should attempt to negotiate a steep incline. Failure to adhere to this warning may result in a roll-over causing vehicle damage and/or operator and passenger injury.

WARNING — Never operate vehicle where visibility is impaired due to weather and/or terrain.

8. Vehicle is equipped with trailer hitch receptacle that will accept a 1-1/4 square CLASS I type hitch. These hitches are readily available in a variety of configurations from most hitch suppliers. A hitch pin or ball may be used to connect the hitch to the trailer. When towing a trailer close attention must be paid to turning radius, vehicle speed, and braking distance. These factors are limited by the configuration of the trailer, load in the trailer, and terrain. The maximum trailer weight (trailer plus load) must not exceed 500 pounds with a tongue weight not to exeed 50 pounds.

CAUTION — When towing a trailer, allowances must be made for greater stopping distances that may be required as a result of the increased weight. Additionally, when turning, care must be taken to prevent the trailer from coming into contact with the rear of the vehicle or rear tires. This could result in the trailer riding up over the rear tires causing damage to the vehicle and possible personal injury. Also, good judgement must be used when towing a trailer on other than smooth, flat terrain.

WARNING — The 50 pounds tongue weight and 500 pounds maximum trailer weight must not be exceeded as this may cause the front wheels to lose contact with the ground resulting in no steering and insufficient braking to stop the vehicle, resulting in possible damage to the vehicle or personal injury.

TURNING MANEUVERS

For better maneuverability, this vehicle has been equipped with a differential rear axle which allows the rear wheels to turn at a different rate.

When negotiating a turn, the wheel on the inside of the turn must travel a shorter distance than the outside wheel. As the rear axle permits a different rate of wheel

rotation, it is enough to merely steer this vehicle into a turn. Practice turning at slow, constant speeds. Defer increased speeds unitl you are confident of your proficiency and are intimately familiar with the terrain.

Incorrect turning techniques or excessive speed may cause the front wheels to slide straight ahead without affecting the vehicle's direction of travel. If this should occur, slow the vehicle down and proceed through the turn.

If the front wheels tend to skid in mud, sand, or snow, you may be able to improve control by releasing the throttle and allowing the vehicle to coast through the turn.

If the rear wheels inadvertently skid sideways, correct your slide by steering in the direction of the skid, if you have room to perform this maneuver safely. Avoid braking or accelerating until you have control.

To avoid skids while traveling on slippery terrain, the rider must exercise a high degree of caution. Turning manueuvers on slippery terrain are more hazardous than those performed under full traction and must be done slowly.

Surface composition is a major factor affecting skidding. It is easier to slide on packed snow than in deep sand. It is dangerous to skid on ice, because you may lose all directional control, and it is dangerous to skid on pavement, because you may regain traction suddenly and unexpectedly, which can cause the vehicle to overturn.

CLIMBING HILLS

Practice climbing on evenly surfaced slopes of less than 20 degrees. The vehicle's capability in climbing hills or traversing any specific terrain is dependent upon rider skill and vehicle load. As you gain experience in handling this vehicle, and learn the hazards to be encountered and your own limitations you may then proceed to ride more challenging terrain. However, you must first be able to discern and avoid any hill or hazard that would cause this vehicle to overturn.

Take a running start, at the appropriate speed for the ascent, and climb at a steady rate of speed.

WARNING — Do not apply power suddenly by opening the throttle while ascending a hill or the front wheels may rise from the ground. If the front wheels lift, the operator control will be lessened and the vehicle may overturn backwards.

If you should find that you have incorrectly estimated climbing capability and lack the power or traction to continue the ascent, if space permits and the slope of the hill is not too steep, turn the vehicle around while you still have the forward speed to do so and descend. Avoid stalling part way up a hill, as manuevering will then become more difficult.

CAUTION — Before attempting a turn on a hillside, the operator should first master the turning technique on level ground.

If you do lose all forward speed, and can neither continue uphill nor maneuver the vehicle under its own power, release the throttle and allow the vehicle to slowly coast back down the hill, periodically applying the brakes to control speed.

CAUTION — To avoid overturning, the operator must exercise a high degree of caution when backing the vehicle down the hill.

DESCENDING HILLS

It is usually advisable to descend hills with the vehicle pointed directly downhill, avoiding angles that would cause the vehicle to lean sharply to one side. As you approach the point of descent, stop and survey the terrain below. Never ride headlong past your limit of visibility. When you have picked a safe path of descent, descend slowly wth the throttle closed. Sit back on the seat, with arms extended and braced on the steering wheel.

When descending it is recommended that the rider apply the brake intermittently to further reduce forward speed.

WARNING — Braking effectiveness is reduced while descending any incline with a loose surface.

TRAVERSING SLOPES

When riding across a slope, at right angles to the incline of the hill, lean your body in the uphill direction to help maintain balance and stability. On a loose surface such as sand, it may become necessary to steer slightly uphill in order to maintain your course of travel.

WARNING — Balance is more precarious while the vehicle is tilted to one side. Avoid traversing slopes where there is slippery or difficult terrain.

RIDING THROUGH WATER

Do not ford any stream with fast flowing water. The tires may float, making it difficult to maintain control.

Do not ride the vehicle through water for prolonged periods.

The vehicle can ford water to a depth of approximately 4-6 inches, although the rider must be careful to avoid getting the spark plug or air cleaner wet.

When crossing shallow streams, choose a course where both banks have gradual inclines. Proceed at a slow, steady speed, and take care to avoid submerged obstacles and slippery rocks.

If loss of forward motion or pulling power is noticed when riding in water, it indicates the torque converter belt has become wet. When this occurs, the rider should immediately head toward shore at minimum throttle required to maintain motion. Once on shore, the torque convertor belt will dry quickly if rider will sit for a few moments with the engine idling.

After riding through water, the brakes will be less effective than normal. Test the brakes after traveling through any water, and if necessary, apply the brakes repeatedly until the heat of friction has dried them and the brakes regain their normal effectiveness.

WARNING — Do not operate vehicle at high speeds until brakes are dry and effective.

PASSENGERS

This vehicle is designed and constructed so that a single passenger is allowed to ride with the operator when the following guidelines are observed for safety:

1. The passenger must be of sufficient age, understanding, mental capacity, and physical capability to control and restrict their motion within the moving vehicle, and to effectively react to minimize any possibility of personal injury.

WARNING — The operator and passenger should always wear a properly fitting approved helmet, protective clothing, and goggles or face shield. (See #13 WARNING on page 2)

2. The operator must be of sufficient age, understanding, mental capacity, and physical capability to control the vehicle in a responsible manner and prevent unnecessary risk to the passenger and himself/herself. That requires a thorough understanding of the vehicle's operation and all safety rules, WARNINGS, and CAUTIONS.

SEAT BELTS AND HARNESSES

This vehicle is equipped with lap belts and harnesses. These are to be used by the operator and passenger at all times to control their motion in the vehicle. **The belts and harnesses must be adjusted properly prior to vehicle operation.**

WARNING — Failure to wear and adjust the belts properly may allow the operator and/or passenger to move around the passenger compartment which may result in loss of control of the vehicle and/or personal injury.

CAUTION — The passenger seat belt and harness must be secured when a passenger is not present or the belts may get caught in the rear tires or surrounding environment resulting in possible loss of control and damage to the belts and harnesses.

MAINTENANCE

CAUTION — When making repairs or adjustments to the vehicle which do not involve adjustments to the engine, the spark plug wire must be disconnected and kept away from the spark plug to prevent accidental starting.

PERIODIC MAINTENANCE SCHEDULE

The maintenance intervals shown in the following schedule are based upon average riding conditions. Vehicles subjected to severe use, wet conditions, or unusually dusty areas require more frequent servicing. See Engine Owner's Manual for additional requirements.

Check all fasteners	Each Use
Check engine oil level	Each Use
Change engine oil	(1st 2 hrs). 25 hrs.
Clean foam air cleaner element	25 hours.*
Test brakes	Every use
Lubricate chassis	3 hrs.
Grease spindles	Weekly
Inspect muffler installation	Weekly
Clean spark arrester (if installed)	50 hrs.
Clean and gap spark plug	100 hrs.
Inspect chain	Weekly
Inspect brake and throttle systems	Every Use
Check remote stop switch function	Every Use
Check battery electrolyte level	Monthly
Inspect electrical system	Every Use
Inspect torque converter assembly	Every Use
Check tire pressure	Every Use
Inspect all warning decals	Every Use

*When used in very dusty condition, service air cleaner daily.

ENGINE LUBRICATION

Oil in the engine crankcase must be changed after the first two hours of operation of the new engine and after each 25 hours of use thereafter. That will ensure proper lubrication of internal parts and prevent costly repairs due to excessive wear.

WARNING — Disconnect the spark plug wire and place wire where it cannot make contact with the spark plug before changing oil.

TO CHANGE OIL

1. Remove drain plug from the oil drain tube located at front side (jackshaft located at the rear of the engine). (See Fig 2) Park the vehicle so that the rear of the vehicle is somewhat higher than the front and drain oil into suitable container for recycling or proper disposal.
2. Replace drain plug and tighten securely.
3. Place vehicle in a level position. Refill crankcase according to ENGINE OPERATING INSTRUCTIONS. Use same grade of oil as used originally. Reconnect spark plug wire.
4. Check oil level before each use of vehicle. Add oil as required to bring up to proper level. Do not mix various grades of oil.

CHASSIS LUBRICATION

Every two or three hours of use lubricate the following items with several drops of oil as shown in Figure 4; steering bearing points, tie rod ends, brake rod pivot points, pedal pivot points, door hinges, door latch, and and parking brake handle. Use the same grade of lubricating oil used in the engine crankcase.

Grease the spindles with a general purpose grease using a standard grease gun weekly. Grease should be added until it is coming out of the ends of the spindles. Wipe off excess grease.

ENGINE CLEANING

WARNING — Engine controls must be kept clean and dry at all times since dirt and/or water on the throttle can cause the throttle to stick or freeze if operated at freezing temperatures. If the throttle sticks at high speed, loss of control may result.

Keep the engine clean. With a clean rag, wipe off the dirt and oil from around controls. Wipe off all spilled fuel and oil. Keep the engine clear of foreign matter to ensure that the engine has proper air circulation and poperly functioning controls. Remember that this is an air cooled engine and a free flow of air is essential to proper performance and a long engine life.

WARNING — Avoid contact with the muffler after the engine has been running. This area gets hot very quickly, and may cause burns on contact.

CHAIN ADJUSTMENT AND INSPECTION

After the first two hours of operation check the chain adjustment, and readjust if it has more than 1/2" flex.

Loosen the engine clamp nuts, and slide the engine, torque and timing belt assembly toward the rear of the kart to tighten the chain. Allow about 3/8" — 1/2" flex for proper adjustment. Make sure that the torque converter chassis and axle sprockets are aligned. Tighten the four engine clamp nuts.

Inspect chain for condition of rollers and o-rings, and inspect sprockets for wear, if either is bad replace and readjust the chain.

CAUTION — Lubricate the Roller Chain ONLY with lubricant for O-RING CHAIN. Other lubricants may damage the o-rings in the Chain.

TIMING BELT ADJUSTMENT

The Timing Belt is factory adjusted and should not need field adjustment unless a new belt has been installed. Adjustment of the Timing Belt is accomplished by adding or removing Shims between the Idler Bracket and the front Engine Mounting Plate. Adding Shims loosens the belt. Removing shims tightens the belt. The belt has proper tension when it can be deflected approximately 3/8 to 1/2 inch by pressing down by hand between the two pulleys. When remounting the Idler Bracket the front holes in the Idler Bracket are used on the 9 HP Briggs & Stratton MODEL 185437 ENGINE and the rear holes are used on all other engines.

WARNING — Do not attempt to adjust the Chain or Timing Belt with Engine running because personal injury may occur.

TORQUE CONVERTER MAINTENANCE

Inspect the Torque Converter Clutch Driving Pulley, Driven Pulley, and Belt on a regular basis. Check for dirt and frayed belt plus any other potential problem that might be obvious from a visual inspection. If the vehicle is used regularly, the Driving and Driven Pulleys should be inspected thoroughly each month. Always service units before each session. Maximum service interval recommended is each 50 hours of operation.

Driving and Driven Pulleys should be parallel. Friction faces must be smooth and free of dirt, corrosion, oil, or grease. Belt must be dry, straight, and free of cracks, breaks, and uneven wear.

The friction faces of the Driving Pulley and Belt will become glazed due to use and the drive performance will deteriorate. With the ENGINE STOPPED, the spark plug wire DISCONNECTED, and the Belt removed, Drive performance can be restored by lightly sanding the friction faces of the Driving Pulley and Belt with fine grit sandpaper or emery cloth.

On the Driven Pulley, Cam Buttons between the cam faces will wear and should be replaced before metal to metal contact between the cam faces occurs.

Operating the vehicle in a dusty or muddy environment will require more frequent servicing.

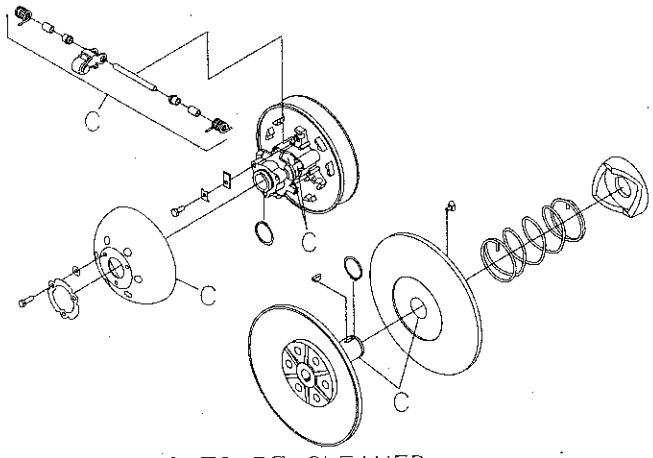
Indicators of a Torque Converter system requiring cleaning and lubrication are erratic or jerky engagement upon acceleration and a tendency to apparently "lock" into a particular speed (a second cause of jerky engagement is a drive chain with excessive looseness). If either of these conditions exist on your unit, the torque converter components must be serviced immediately. Both Driving and Driven Pulleys shoud be disassembled and cleaned thoroughly of all dust and accumulated dirt. No lubrication on any of the components of the Driving or Driven Pulley is required.

After servicing of the Torque Converter and reinstalling on the Kart the rear of the frame should be raised up with the Jack provided and supported with a pair of jack stands so the Rear Tires do not contact the ground. The Engine can now be started and run through its entire operating range to ensure proper operation of the Torque Converter system. SEE FIGURE 5 FOR JACK LOCATION AND SECTION "OPERATION-OPERATING CONTROLS — JACK" FOR JACK OPERATION.

WARNING — Never place any part of the body under the vehicle or start the vehicle while it is on the jack. If the vehicle is to be started while the tires are off the ground, support the rear of the unit with a pair of suitable jack stands. If these instructions are not followed vehicle damage, property damage, or personal injury may result.

WARNING — Do not operate this vehicle if the torque converter is malfunctioning.

CAUTION — The Engine must not be operated without the Belt installed on the Driving and Driven Pulleys.



C – AREAS TO BE CLEANED

FIGURE 6

LOCKNUTS

Two types of locknuts are used in this vehicle: Prevailing-Torque and Free-Running.

Prevailing-Torque type locknuts have some type of locking feature which deforms the thread in the nut. Those nuts must be turned with a wrench after being started (1 or 2 turns) by hand. The deformed thread lock tends to have reduced locking capability with repeated disassembly and assembly. Those locknuts are to be replaced when they no longer firmly lock on the screw thread.

Free-Running type locknuts have serrations or notches which grip a mating surface, when the nut is securely tightened against it. For that type of nut to lock, it must be securely tightened.

WARNING — Replace locknuts when locking feature is no longer functioning properly.

PEDAL CONNECTIONS

The pedal connections to the brake rod and to the throttle cable are pivot points and should be oiled in accordance with the chassis lubrication instructions. **Do not overtighten those attaching fasteners. They must pivot freely.**

WARNING — Failure to maintain the brake and the throttle systems as described above will result in a strong possibility of severe personal injury or loss of life.

AIR CLEANER

The air cleaner must be serviced. The air cleaner prevents dust, dirt, and grit from being drawn into the engine through the carburetor where it would cause excessive internal wear and eventual engine failure. A dirty or clogged air cleaner also restricts the air flow resulting in poor engine performance and shortened engine life.

If the engine is operated in an area where there is a very little dust, the cleaner should be serviced with each oil change (25 hours) or more often if there are signs of becoming clogged wth dirt. When operated under dusty conditions, clean the filter element every 8 hours or less. The engine is equipped with a serviceable air cleaner which must be periodically removed and cleaned or replaced to maintain maximum engine performance. **Do not operate the engine without an air cleaner element properly installed.**

Refer to your Engine Owner's Manual for specific air cleaner maintenance instructions.

CARBURETOR ADJUSTMENTS

Never make unnecessary adjustments. The factory settings are correct for most applications. Refer to the Engine Owner's Manual for specific instructions for carburetor adjustment if required.

WARNING — Do not change governor setting. Changes in governor setting could increase engine speed which may cause the vehicle to travel at unsafe speeds resulting in personal injury and decreased engine life.

MUFFLER

The muffler installed on the engine of this vehicle requires periodic inspection. It should be checked weekly to ensure no holes have developed and that the muffler is clean and secure to the engine. Any damaged parts should be replaced immediately.

CAUTION — Failure to properly maintain the muffler and related equipment of this vehicle will result in possible equipment damage.

WARNING — Avoid contact with the muffler after the engine has been running. This area gets hot very quickly, and may cause burns on contact.

SPARK ARRESTER/DEFLECTOR

This engine muffler may be equipped with a spark arrester and/or an exhaust deflector. The spark arrester is similar in appearance to a window screen. It is intended to prevent carbon sparks from being discharged from the muffler.

CAUTION — A spark arrester may be required by law in certain areas. If the vehicle has no spark arrester, it can be ordered for some vehicles (See back of Operator's Manual for ordering instructions).

The exhaust deflector installs over the discharge end of the muffler and directs the flow of exhaust. That is necessary to protect vehicle body parts and certain other components from the hot flow of exhaust.

CAUTION — Misalignment of the exhaust deflector can cause damage to vehicle and panels in the flow of engine exhaust.

The spark arrester and deflector should be removed after 50 hours of use for cleaning and inspection. Replace either if damaged. Reinstall in the same orientation as originally shipped.

SPARK PLUG INSPECTION AND ADJUSTMENT

1. Remove, inspect, and adjust the spark plug according to the Engine Owner's Manual each time the oil is changed.
2. Before installing the spark plug, coat the threads lightly with a graphite grease or anti-seize compound to ensure easy removal when the spark plug again needs inspection.
3. It is advisable to replace the spark plug at least once each year to ensure easy starting and good engine performance.

FRONT AND REAR WHEEL REPLACEMENT

The following steps are required to remove and replace the tires.

1. Break the lug nuts loose.

WARNING — Never place any part of the body under the vehicle or start the vehicle while it is on the jack. If the vehicle is to be started while the tires are off the ground, support the rear of the unit with a pair of suitable jack stands. If these instructions are not followed vehicle damage, property damage, or personal injury may result.

2. Jack up the front or rear of the vehicle depending upon which tire is to be changed. SEE FIGURE 6 FOR JACK LOCATION AND SECTION "OPERATION-OPERATING CONTROLS — JACK" FOR JACK OPERATION.
3. Remove the lug nuts and wheel and tire assembly.
4. Install replacement wheel and tire assembly and install lug nuts (cone side toward the wheel) and tighten finger tight.
5. Lower jack and tighten the lug nuts to 40 FT-LB of torque.

WARNING — The threads on the nuts and studs must be inspected to ensure that they are in good condition and nuts tightened to 40 FT-LB of torque to prevent the wheels from falling off.

FRONT WHEEL ALIGNMENT

1. The front wheels should be "toed-in" from 1/8" to 1/4". To check alignment, measure distance A and B (Figure 8) to the center line (CL) of the tires with the wheels pointed straight ahead. For the proper toe-in dimension A should be 1/8" - 1/4" greater than dimension B.
2. When the steering arm on the steering column is vertical and centered, the front wheels are to be aligned directly forward (not turned). If the wheels are turned when the steering arm is vertical the steering angle either to the right or left is reduced and the wheels require alignment. If the need for alignment is found in either paragraph 1 or 2, proceed with paragraph 3 below.
3. The vehicle is equipped with tie rods as shown in Figure 8, and are to be adjusted as follows: Loosen and move jam nuts away from the rod ends. To make dimension B smaller, rotate the tie rod in the clockwise direction on both tie rod assemblies 1 or 2 full turns. If B needs to be larger, rotate the tie rods in the counter-clockwise direction on both tie rod assemblies. NOTE: The tie rod assemblies may require individual adjustment to ensure that the wheels are directed forward when the steering arm is in the vertical position and to adjust the toe-in so that each wheel has an equal amount of toe-in. Tighten the jam nuts snugly against the rod ends. NOTE: BOLTS AND NUTS MUST BE IN PLACE AND TIGHT BEFORE CHECKING THE DIMENSIONS. Recheck the distance and repeat the above steps until the dimensions are per paragrah 1 and 2 above.

WARNING — Ensure that the jam nuts have been tightened securely prior to operating the vehicle.

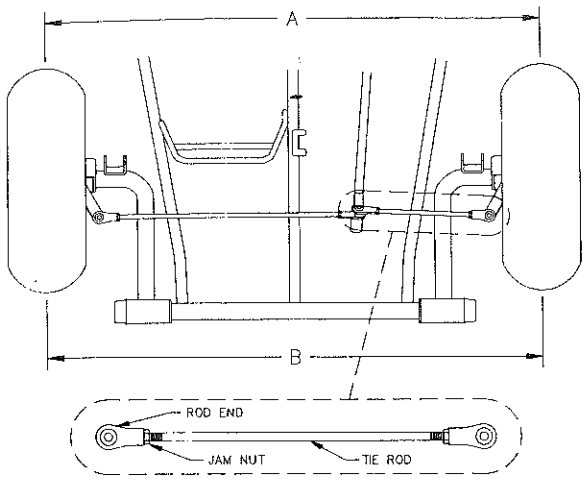


FIGURE 7

BRAKE SERVICE

BRAKE ADJUSTMENT

DISK BRAKES

The Brake should be adjusted if the Brake Pedal travel is excessive, the Brake does not stop the vehicle, or the Parking Brake does not hold when applied. The Brakes should also be adjusted if there is excessive brake drag of the Brake Pads against the Rotor or the Kart does not move freely with the Parking Brake not set. There is a Minor Brake Adjustment which may be used several times beween Major Brake Adjustments. The Major Brake Adjustment should only be required when the Minor Brake Adjustment is no longer effective or there is no additional adjustment of the large nuts (Ref. 9 & 10) on the Brake Cable Housing.

WARNING — If the brakes are not properly adjusted the Stopping Distance will increase or the parking brake may not hold the vehicle. (See BRAKE TEST in the OPERATION OPERATING CONTROLS section of this manual.)

WARNING — Ensure that proper fasteners in good condition are installed throughout the brake system. Failure of these fasteners may cause brake failure.

MINOR BRAKE ADJUSTMENT

1. Loosen the Front Jam Nut (Ref. 9) and turn it counterclockwise toward the end of the Brake Cable Housing.
2. If the Brake Pads are dragging on the Brake Rotor or the Kart does not move freely with the Parking Brake not set, turn the Rear Jam Nut (Ref. 10) clockwise until the Brake Pads are only slightly dragging on the Rotor and the Kart moves freely. Tighten the Front Jam Nut against the bracket and Rear Jam Nut. Check for proper operation of the Brake as outlined in the BRAKE TEST paragraphs of the OPERATION OPERATING CONTROLS section. If brakes do not perform properly, re-adjust.
3. If the pedal travel is excessive, the brake does not stop the vehicle, or the parking brake does not hold when applied, turn the Rear Jam Nut (Ref. 10) counterclockwise until the Brake Pads are slightly dragging on the Rotor and the Kart still moves freely. Tighten the Front Jam Nut against the bracket and Rear Jam Nut. Check for proper operation of the Brake as outlined in the BRAKE TEST paragraphs of the OPERATION OPERATING CONTROLS section. If brakes do not perform properly re-adjust.

MAJOR BRAKE ADJUSTMENT

1. Loosen the Front Jam Nut (Ref. 9) and turn it counterclockwise to the end of the Brake Cable Housing. Turn the Rear Jam Nut (Ref. 10) clockwise to the maximum extent possible. This will provide the maximum travel of the Brake Cable Housing in the bracket.
2. Detach the Brake Cable from the Brake Caliper Lever (Ref. 6) by removing the Nut (Ref. 14), Bolt (Ref. 11), Bushing (Ref. 13), Flat Washer (Ref. 12). Remove the Nut (Ref. 5) that holds the Brake Caliper Lever on the splined shaft of the Brake Caliper. Remove the Brake Caliper Lever from the splined shaft of the Brake Caliper.
3. Loosen (two complete turns or more) the 1/4 inch bolt (Ref. 2) that prevents the Threaded Hexagon Brake Module (Ref. 7) from turning.
4. Use the points of the jaws of a pair of needle nose pliers to engage two 3/16 dia. holes on the face of the Threaded Hexagon Brake Module. The two holes should be on opposite sides of the splined shaft. Turn this Module clockwise until the Brake Pads (Ref. 8a) are snug against the Rotor. Turn this Module counterclockwise until the first flat of the Threaded Hexagon Brake Module is aligned with the 1/4 inch bolt that prevents this assembly from turning. Tighten the 1/4 inch bolt (Ref. 2).
5. Slide the Brake Caliper Lever (Ref. 6) on the splined shaft of the Brake Caliper in the rear most position allowed by the Brake Caliper Mounting Bracket. Install and tighten the Lock Nut (Ref. 5) that retains the Lever.

WARNING — Replace this Lock Nut when its locking feature is no longer functioning properly.

6. Connect the Brake Cable to the Brake Caliper Lever (Ref. 6) by installing the Nut (Ref. 14), Bolt (Ref. 11), Bushing (Ref. 13), Flat Washer (Ref. 14). as shown.
7. Turn the Rear Jam Nut (Ref. 10) counterclockwise until the Brake Pads are slightly dragging on the Rotor and the Kart still moves freely. Tighten the Front Jam Nut against the bracket and Rear Jam Nut. Check for proper operation of the Brake as outlined in the BRAKE TEST paragraphs of the OPERATION OPERATING CONTROLS section. If brakes do not perform properly, re-adjust.

WARNING — Ensure that proper fasteners in good condition are installed throughout the brake system. Failure of these fasteners may cause brake failure.

ROUTINE BRAKE MAINTENANCE

The routine maintenance presented below is required to keep the brake system in good working order.

1. Inspect the entire braking system to ensure that all connections are secure, all pivot points move freely, the Caliper moves freely on its mounting bolts, and Caliper Actuator Lever moves freely.
2. Check Brake Pads for wear and replace if needed. In normal service, Pads will need replacing only after prolonged use. Always replace both Pads at the same time.
3. Check Brake Rotor surface condition. Replace if it is badly worn, warped, or pitted.

DISASSEMBLY AND PAD REPLACEMENT

1. Detach the Brake Cable from the Brake Caliper Lever (Ref. 6) by removing the Nut (Ref. 14), Bolt (Ref. 11), Bushing (Ref. 13), Flat Washer (Ref. 12).
2. Remove the two Chain Guard Mounting Bolts from the rear half of the Chain Guard and remove the Chain Guard.

3. Remove the Nut (Ref. 5), that holds the Brake Caliper Lever on the splined shaft of the Brake Caliper. Remove the Brake Caliper Lever from the splined shaft of the Brake Caliper.
4. Remove the two nuts from the Caliper Mounting Bolts and slide the bolts out of the Caliper Mounting Bracket. Remove the Caliper Assembly from the Kart.
5. Loosen (two complete turns or more) the 1/4 inch bolt (Ref. 2) that prevents the Threaded Hexagon Brake Module (Ref. 7) from turning.
6. Turn the Hexagon Brake Module counterclockwise until the Brake Pad next to the Actuator can make contact with the Caliper body (Ref. 1).
7. Remove the 3/8" bolt (Ref. 3) that supports the Brake Pads and Spacers in the Caliper and remove the old Pads and Spacers. Note the location of the Spacers and Pads for help in positioning the new Pads and Spacers.
8. Clean and apply a high temperature anti-seize compound to the face of the piston (Ref. 7g) to prevent sticking.
9. Position the new Brake Pads and Spacers (Qty. 4) in the Caliper. The Spacers are between the fixed Pad and the Caliper. There are no Spacers between the other Pad and the Actuator. Install and tighten the 3/8" bolt that supports the Brake Pad and Spacers.
10. Place the two Caliper Mounting Bolts in the Caliper and position the Caliper over the Brake Rotor and against the Caliper Mounting Bracket. Insert the two Caliper Mounting Bolts through the Bushings of the Caliper Mounting Bracket. Install the self-locking nuts on the Caliper Mounting Bolts and tighten until the fixed Pad makes slight contact with the Brake Rotor.
11. Slide the Brake Caliper Lever (Ref. 6) on the splined shaft of the Brake Caliper in the rear most position allowed by the Brake Caliper Mounting Bracket. Install and tighten the Lock Nut (Ref. 5) that retains the Lever.
12. Connect the Brake Cable to the Brake Caliper Lever (Ref. 6) by installing the Nut (Ref. 14), Bolt (Ref. 11), Bushing (Ref. 13), Flat Washer (Ref. 14). as shown.
13. Adjust the brakes by following the MAJOR BRAKE ADJUSTMENT procedure, then the MINOR BRAKE ADJUSTMENT procedure above.

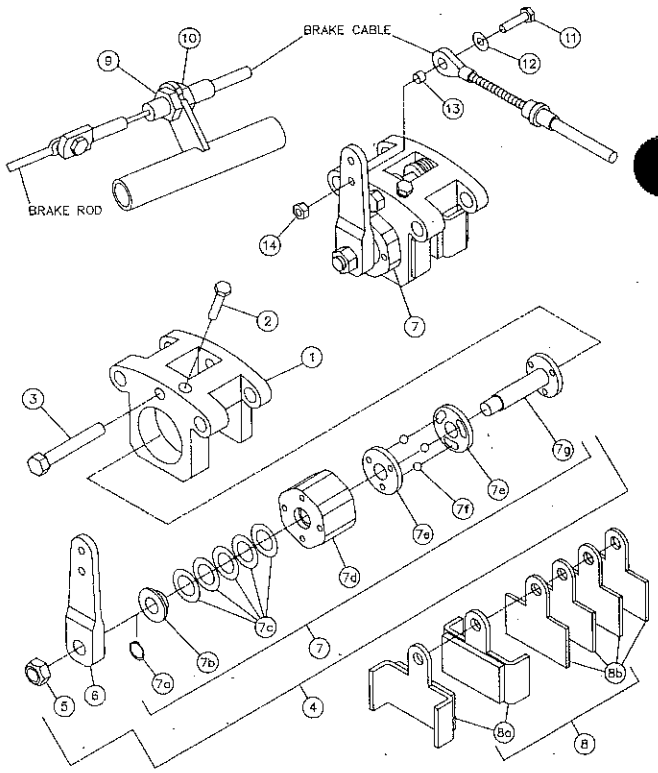


FIGURE 8

REF. NO.	PART NO.	DESCRIPTION
1		CALIPER BODY
2	9460	MODULE SET SCREW
3	9461	RETAINING SCREW
4	9465	LEVER AND MODULE ASM.
5	9462	LOCK NUT
6	9463	LEVER
7		BRAKE MODULE
7a.		RETAINING RING
7b.		RETAINER
7c.		BELLEVILLE SPRING
7d.		MODULE BODY
7e.		CAM PLATE
7f.		BALL
7g.		PISTON
8	9466	BRAKE PAD REPAIR KIT
8a.		BRAKE PAD
8b.		SPACER
9		JAM NUT
10		JAM NUT
11	1847	1/4-20 x 1 HEX CAP SCREW GR 5
12	1854	#14 MS FLAT WASHER
13	1389	BUSHING 1/4 I.D. x 5/16
14	9057	1/4-20 TOPLOCK HEX NUT

BATTERY

WARNING — Prevent the electrolyte from coming into contact with skin, eyes, and clothing. Contact with skin or eyes will result in severe burns and contact with clothing may decompose the material. If contact is made, flush immediately with water.

1. Check electrolyte level once a month. If found below the middle of the UPPER and LOWER LEVEL, add distilled or clean drinking water to restore proper level.

   CAUTION — Never use ACID to refill battery.
2. Charging is recommended anytime water is added to the battery. One half hour is usually sufficient if battery gravities were high enough prior to adding water. Usually the gravities are adequate if the battery was fully charged but low on water.
3. Keep battery clean. Apply grease or a corrosion preventative around terminals to prevent corrosion.
4. Inspect vent tube to ensure that it is properly attached to the frame as illustrated in Fig. 3 and that it is free of obstructions and kinks. See Battery "FILLING AND INSTALLATION INSTRUCTIONS" for additional information.

WARNING — Battery may generate explosive gases after filled with acid and during charging or use. Keep sparks, flame, cigarettes, or anything flammable away. Ventilate when charging or using battery in an enclosed space, and ensure that the battery vent path is always open.

LIGHTS

The lenses on the Headlights and Taillights must be kept clean at all times to provide optimum performance of the lights. The lights may be cleaned by washing with a mild detergent and water and drying or cleaning with glass cleaner and paper towel.

CAUTION: Ensure that the lenses are clean and the mounting hardware on the lights is tight at all times to prevent damage to the lights and vehicle and prevent possible operator injury.

DECALS

WARNING — Safety decals must be replaced if they become illegible or become detached from the vehicle. If they are illegible or missing, adequate warning of potential hazards or safety requirements may be lacking. This could result in the operator and/or passenger not taking the proper safety precautions.

When the warning decals become illegible and/or detached the old decal must be removed if applicable, the area cleaned with a liquid dish washing detergent, dried thoroughly, and the new decal installed. See the OWNER'S MANUAL SUPPLEMENT for part numbers and contact the nearest dealer to order replacements.

WELDING

WARNING — Welding this unit will cause failure of the magneto in the engine, brake cable, and throttle cable if the ground cable from the welder is not located properly on the frame of the vehicle. NOTE: COMPOSITE BEARINGS ARE USED TO CONNECT THE POWER PLATFORM AND FRONT SWING ARMS TO THE MAIN FRAME WHICH ISOLATE THESE UNITS FROM THE MAIN FRAME CAUSING THE CURRENT PATH TO BE THROUGH THE ENGINE, BRAKE CABLE, AND THROTTLE CABLE.

If welding is ever required to repair damage that may occur as a result of an accident or the addition of accessories care must be taken to prevent the destruction of the magneto, brake cable, and throttle cable. The ground cable from the welder must be clamped on frame member being welded. When welding the main frame, seat frame, custom bars, power platform, and trailing arms the welder ground clamp must be on the unit being welded.

SEAT BELTS AND HARNESSES

Inspect seat belts and harnesses to ensure that the buckles are clean and functioning properly and the belts are not frayed. If the straps are frayed or the buckles do not function properly the defective units must be replaced. The belts and buckles may be cleaned with a mild detergent and water and dried with a towel.

WARNING — If the straps are frayed and/or the buckles are not functioning properly replace the belts and or harnesses that are defective prior to operating the vehicle because defective belts or harnesses may come loose and allow the operator and/or the passenger to move around in the passenger compartment resulting in personal injury.

STORAGE

In the event the Vehicle is not to be operated for a period in excess of 30 days and at the end of each riding season prepare for storage as follows:

WARNING — Do not drain fuel while engine is hot. Be sure to move vehicle outside before draining fuel.

1. Drain fuel tank and remove all fuel remaining in the tank by using a suction device or by soaking up with a clean rag or towel. Remove all fuel remaining in the carburetor by allowing engine to run out of fuel.
2. Lubricate engine cylinder by removing the spark plug and pouring one ounce of clean lubricating oil through the spark plug hole into the cylinder. Crank the engine slowly with the starter rope to spread oil and replace spark plug.
3. Do not save or store gasoline over winter. Using old gasoline which has deteriorated from storage will cause hard starting and affect engine performance.
4. Monthly charging of the battery is recommended in the off-season. For 12N and YB batteries, an overnight charge should suffice. See Battery "FILLING AND INSTALLATION INSTRUCTIONS".

WARNING — Battery may generate explosive gases after filled with acid and during charging or use. Keep sparks, flame, cigarettes, or anything flammable away. Ventilate when charging or using battery in an enclosed space, and ensure that the battery vent path is always open.

WARNING — When the vehicle is removed from storage re-read the OPERATOR'S MANUAL, perform any assembly required, and perform the PRE-RIDE INSPECTION.

GENERAL

Just as your automobile needs professional, mechanical maintenance from time to time, so does this vehicle. Replacement of the spark plug and air cleaner is made necessary by normal use. Professional air cooled engine service is easily obtained. Check your phone book yellow pages under "Engines-Gasoline."

CAUTION — Always follow rules for safe operation.

WARNING — Read Operator's Manual completely before operating.

MANCO POWERSPORTS, LIMITED WARRANTY

Manco PowerSports (hereinafter referred to as "Manco") hereby warrants to the **original purchaser** that the frame components of new Manco recreational vehicles will be free from defects in material and workmanship. The period of warranty is **thirty (30) days** from date of purchase for the component parts (except as noted below), and a period of **ninety (90) days** from date of purchase for the frame. Engine warranty varies with the Engine Manufacturer and product type. The warranty period for the engine can be between 90 days and 3 years. Please check with a Service Center for your Engine's Manufacturer to verify your engine warranty. Manco, if notified of a defect in material or workmanship during the period of warranty, will repair or replace, at its option, defective parts at no charge, other than the reasonable cost for the transportation of the component(s). Manco will also agree to pay reasonable charges for labor, if necessary, to perform a warranty repair.

The original purchaser must operate the vehicle and maintain the vehicle in accordance with the instructions provided in the Operator's Manual, the supplements thereto and labels affixed to the vehicle. Additionally, within ten (10) days of the discovery of an alleged defect, the original purchaser must provide written notification to: **Manco's Customer Service Department at 4404 Engle Ridge Drive, Fort Wayne, IN 46804**.

General Exclusions: This limited warranty does not cover component failure or damage caused by any of the following: abnormal strain or stress; neglect; abuse; improper assembly of components which were supplied in the factory sealed carton, after the vehicle left Manco; improper maintenance; improper use of the vehicle, including, but not limited to racing, jumping, stunt driving, or any other use prohibited by the Operator's Manual. Additionally, this warranty does **not** cover component failure or damage to vehicles which are leased or rented, or vehicles which are used at a concession track.

Specific Exclusions: This limited warranty does not apply to components, which are subject to normal wear and tear. These items include, but are not limited to, the tires, clutch, the brakes, throttle cable, drive belt, the torque converter, chain, seat, lights, fasteners, decals, or cosmetic body panels. **This warranty does not apply to the engine, which is covered by its manufacturer's warranty.**

MANCO MAKES NO OTHER WARRANTY OF ANY KIND, EXPRESSED OR IMPLIED. ALL WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE WHICH EXCEED THE OBLIGATIONS AND TIME LIMITATIONS SPECIFIED IN THE WARRANTY ABOVE ARE HEREBY DISCLAIMED BY MANCO AND EXCLUDED FROM THIS WARRANTY. ADDITIONALLY, THIS WARRANTY EXCLUDES ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDUNG BUT NOT LIMITED TO LOSS OF USE. SOME STATES DO NOT ALLOW A MANUFACTURER TO EXCLUDE OR LIMIT INCIDENTAL OR CONSEQUENTIAL DAMAGES AND, THEREFORE, THE ABOVE EXCLUSION MAY NOT APPLY TO YOU.

SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY WILL LAST. IT IS POSSIBLE THAT THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER LEGAL RIGHTS, WHICH VARY, FROM STATE TO STATE.

MANCO PowerSports
4404 Engle Ridge Drive, Fort Wayne, IN 46804 Phone: (260) 432-1596 Fax: (260) 432-7870

back page

9495R1

9475R1 - Dan6