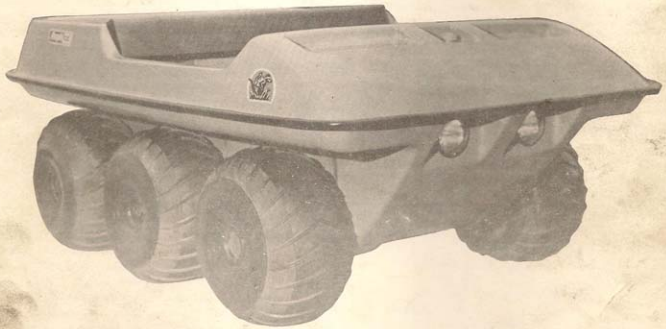
Amphicat

Sole United States Distributor:
MOBILITY UNLIMITED, INC.

OWNER'S MANUAL

MODEL NO. 0079, 0080, 0081 and 0082



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PART I — INTRODUCTION

Your new AMPHICAT is built to provide great pleasure and performance. To be sure of getting all the pleasure and performance from your AMPHICAT, read this manual thoroughly — with the machine in front of you. Before attempting to operate your AMPHICAT familiarize yourself with the machine, the controls and service required. Keep this manual handy for future reference.

PROPER MAINTENANCE AND CARE will assist in keeping your overall operating cost to a minimum. Your AMPHICAT dealer will help you to avoid maintenance problems caused by neglect. See Section VIII.

10 HOUR CHECK: Your AMPHICAT must be given a 10 Hour Check by an authorized AMPHICAT Service Station or Dealer to validate your warranty. A 10 Hour Check coupon is attached to your warranty card, it should be filled out and signed by the authorized AMPHICAT representative performing the check. Retain the completed card to present when making any claim during the warranty period. This is the opportune time to discuss with your dealer any questions which have arisen in the first 10 hours of operation. After the 10 hour check, your AMPHICAT should be taken to your dealer every three months or 50 hours for adjustment, lubrication, and engine tune-up.

LUBRICATION: See Page 10.

ENGINE TUNE-UP AND ELECTRICAL CHECK: Fuel and electrical systems are subject to wear and contamination and require periodic cleaning and adjustment to maintain top performance.

CARBON DEPOSITS: A degree of carbon build-up is normal in the combustion chamber of any gasoline engine and should be removed periodically for best results.

SPARK PLUGS AND IGNITION POINTS: These items are subject to wear and/or contamination. Check and replace, if necessary, for maximum engine performance and economy. See Page 7.

CARBURETOR ADJUSTMENTS: Carburetor adjustment should be done periodically to obtain peak engine performance. See Page 7.

REGARDING YOUR AMPHICAT BODY . . . . Your AMPHICAT is constructed of the modern material Cycolac manufactured by Marbon Chemical, a Division of Borg-Warner Corporation. This material is specified because it is extremely resistant to the abuses encountered in rough terrain. However, the owner of the AMPHICAT should take precautionary measures to protect his investment. See Page 10.

PART II — TABLE OF CONTENTS

PART III — ASSEMBLY INSTRUCTIONS

1) *Tires*:

Your AMPHICAT Tires have been shipped deflated with the valve cores removed. The cores, and a special valve cap, are in a cloth bag shipped with your AMPHICAT. To reassemble the valve cores, thread the valve cores into the valve stems using the special valve cap, see Figure 1.

Mount the Tires, inflated to 63" Circumference, to the Axle Flanges with the Lock Nuts shipped on the Wheel Studs. Check the Tire marking, (L.H. and R.H. for left and right hand.) Prior to mounting the tires. See tire inflation, Page 10.

2) *Battery*:

Your AMPHICAT 12 volt Battery is shipped Dry Charged. To prepare it for service, perform the following steps.

1) Fill the Battery with the Battery Grade Electrolyte provided with your AMPHICAT — 1.250 to 1.265 specific gravity — which is to be obtained from your AMPHICAT dealer.

2) Allow the filled Battery to stand for a minimum of 15 minutes.

3) Place the Battery on fast charge for 15 minutes (in cold weather a longer charge period is desirable.)

Figure 1 — Tire Valve Core Replacement

PART IV — OPERATING CONTROLS

Figure 2 shows the AMPHICAT Operating Controls, the functions of the controls are as follows:

1. *Ignition-Light Switch*

a) First position to the right - RUN - is running position.

b) Second position to the right - RUN/LITES - is running and head light position.

c) Third position to the right - START - is Spring-return start, for Electric Start Engines Only. For maximum charging rate during day light hours operate battery equipped AMPHICATS with the Ignition-Light Switch in RUN position.

2. *Choke Control*

When first starting the unit, pull out the Choke and turn over the Engine until the unit starts. Then depress the choke slowly as the engine warms up.

3. *Throttle Control*

The hand operated throttle lever is located on the right hand control lever. Squeezing the throttle causes the engine speed to increase. When released, the engine will return to idle.

4. *Control Levers*

These two levers operate the left and right clutches and brake bands. To go forward in your AMPHICAT slightly squeeze the throttle and then push both levers all the way forward to engage both clutches. Once moving, increase speed by squeezing the throttle until the desired speed is reached. To stop, pull both levers all the way back to engage both brake bands.

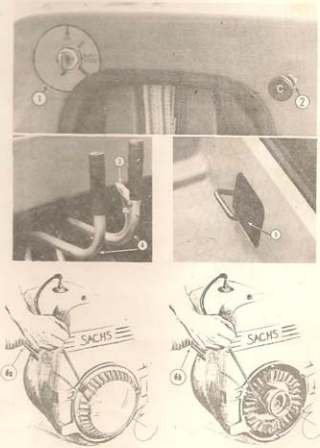

Figure 2 — Operating Controls

Steering is accomplished by engaging one clutch and the other brake band. This causes one set of three wheels to drive and the other set of three wheels to brake, thereby turning the AMPHICAT. To turn to the left, push the right lever all the way forward and pull the left lever far enough back to establish the desired rate of turn. To turn to the right, push the left lever all the way forward and then pull the right lever far enough back to establish the desired rate of turn.

5. Reverse Control

The reverse control brakes the pinion carrier of the planetary gear system and causes the transmission output to reverse direction. Operating either control lever, step 4 above, will oppose the reverse control.

To operate your AMPHICAT in reverse put the control levers in neutral position slightly squeeze throttle and press down on reverse control with foot. Increase speed by squeezing throttle until desired speed is reached.

To stop, release reverse control and pull both control levers, see step 4 above, all the way back.

6. Rope Start

a) Manual-Start Engine
Pull Starter Handle to crank engine. Do Not let handle snap back after pulling. Let cable feed back on rewind slowly. See Figure 2, Page 4.

b) Electric-Start Engine
A Starting Rope is included in Tool Kit provided with your Electric Start AMPHICAT. To attach Rope to engine, see Figure 2, Page 4. Attach Rope to Starter and pull to start engine.

PART V — FUEL MIXTURE INSTRUCTIONS

The correct oil-gasoline ratio is 25:1. An example would be 1 quart oil well mixed with 6 gallons gasoline. Too much oil will cause carbon deposits. Too little oil will cause insufficient lubrication and over heating.

WARNING: Gasoline and oil should be mixed at temperatures above freezing. Below freezing, gas and oil mix with difficulty. Mix with care or damage to engine could result. Always use a separate clean container for mixing fuel, and shake well before filling the tank.

Use only a good grade of HD-SAE 40 (or 30) automotive engine oil.

Use a good grade of regular gasoline. Use fresh gasoline only. Do Not use gasoline left over from summer use or previous year.

If you experience a problem with moisture in the fuel system, a small amount of dry-gas or equivalent may be used.

PART V — FUEL LINE AND ENGINE INSTRUCTIONS

1. Fuel Line System.

Your AMPHICAT is provided with an ON-OFF Valve-Filter assembly on the bottom of the Fuel Tank, see Figure 3.

On initial filling of the Gas Tank, or if the Tank and Fuel Line have been drained for cleaning or storage, the Fuel Line should be primed by removing the Spark Plug Wire, then hold Decompression Valve in and pull Engine through, see Figure 4.

2. Starting Engine.

CAUTION: Before starting the Engine be sure the Engine Drain Valve is closed or Engine Damage and/or power loss may result, see Figure 5 and step (k) below.

a) Fill the Fuel Tank with Proper fuel mixture, see Section V.

b) Open the Fuel Valve, see Figure 3.

c) Move the Choke Lever to choke position, see Page 4.

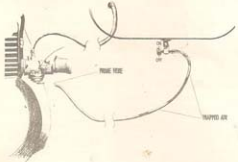

Figure 3 — Fuel Line System

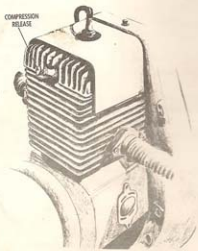

Figure 4 — Decompression Valve

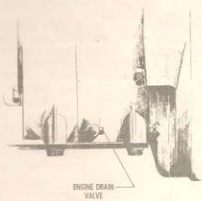

Figure 5 — Engine Drain Valve

d) Turn key start to first position. (On battery-operated ignition system, turn key to full right. See Page 4 .

e) Pull the starter handle with firm steady action, see Page 4 .

f) After each pull, let the rewind mechanism return the handle, but do not let it snap back into place.

g) After the engine starts, gradually move the choke lever to OFF position.

h) Squeeze the throttle lever slightly to allow the engine to warm up for a few minutes or the engine may stall when the throttle is opened, see Page 4 .

i) To stop the engine, turn the key to OFF position.

j) Close the fuel valve when your AMPHICAT is not in use.

k) If difficulty is encountered in starting Engine, check the Vacuum Hose on the bottom of the Carburetor for tightness and for flooded engine. An Engine Drain Valve is provided to drain excess gas-oil mixture from the crank-case, see Figure 5. To open Valve, push on the side of the plunger that is marked red. Be sure to close valve after the engine is fully drained or engine damage and/or power loss may result.

3. *Engine Break-In Period.*

The engine in your AMPHICAT is a quality built product and should be gradually "broken-in" as follows:

1. Operate the engine at not more than ½ throttle for the first few hours.
2. Allow the engine to warm up before operating.
3. Initial operation should be confined to straight and level running.
4. Gradually increase operation to include higher speeds and more difficult terrain.

PART VII — OPERATING INSTRUCTIONS

1. *SAFETY PRECAUTIONS*

a) Equip your AMPHICAT with a CO_2 type Fire Extinquisher. KEEP Extinquisher in your AMPHICAT at all times in an easily accessible location.

b) Familiarize yourself with all operating controls before attempting to operate the AMPHICAT.

c) Do not attempt repairs on your vehicle while engine is running!

d) Disconnect spark plug wire before working on engine or drive elements.

e) Never operate unit without footwell and seat in position.

f) Always use two hands for steering.

g) Keep feet, legs, arms and hands in vehicle while running.

h) Use caution on steep slopes and while turning at high speeds. Maximum safe incline, 35° or 70% grade.

i) DO NOT make fast starts when bystanders are near, stones or other loose objects can be thrown by the tires.

j) Do Not obstruct air intake ports in engine cover and body to prevent engine overheating. Under dusty conditions clean carburetor Air Filter frequently.

k) Maximum safe water load is two (2) persons and 150 pounds cargo.

2. *ELECTRIC START MODELS*

To operate an Electric-Start AMPHICAT without battery, we suggest you leave the lights on to absorb the output from the alternator.

3. *EXTREME COLD WEATHER*

Check cold weather starting procedure in the engine manual. If the unit is stored in extreme cold weather it should be blocked up to take some weight from the tires to prevent the tires from freezing in flat or rest position. If the vehicle is started in motion in cold weather and a rough or bouncy ride results, this is caused by flat spots frozen where the tires rested on the ground. Drive the vehicle slowly until the rubber flexes and a smooth ride results.

Also in winter. the vehicle should be kept covered to minimize snow and water from blowing into motor and drive mechanism.

4. *EXTREME HOT WEATHER*

On new vehicles care should be exercised. To avoid overheating, prolonged periods of racing the engine should be avoided until the unit has been broken in. Also keep the engine air intake ports clear of anything that might obstruct air ventilation.

5. *HILL CLIMBING*

On very steep hills, drive straight up maintaining steady power. Do not attempt cross hill running on steep hills as this may upset the vehicle.

6. *DOWN-HILL*

On steep and dangerous slopes keep the forward clutches engaged and maintain slight throttle so the engine can check momentum. Do not jam or repeatedly pull on the brakes. Also avoid unnecessary side hill maneuvers.

7. *DEEP DITCHES AND OBSTACLES, ETC.*

When crossing deep ditches or when driving over obstacles drive up slowly then ease forward until the front tires touch. Ease the vehicle across or over.

8. *PUSHING VEHICLE*

The wide tread - low pressure tires and the drive component ratios make it difficult to push the AMPHICAT. Removing the Drive chains from each side of the transmission (by removing the chain connecting links) will make the AMPHICAT significantly easier to push.

1. General Service Information

a) *Engine*

Spark Plug

Bosch M 240 T 1 is the recommended Spark Plug. Champion equivalent is UK-10. Recommended Spark Plug electrode gap is .025 to .030 in.

Points

Correct point gap is 0.016 ± 0.002 in. (O.4 ± 0.05 mm). Point gap may be checked with BOSCH feeler gauge EF 1216 A. If gap is not correct see Engine Manual or have timing adjusted by your authorized service representative.

Major Servicing and/or Repair

See separate engine manual or your authorized service representative for major servicing and/or repair.

b) *Carburetor*

Adjustment (See Engine Manual)

The high speed and idle mixture screws have normal right hand screw threads. These adjustments are turned clockwise to close, or lean the mixture, and counter-clockwise to open, or enrichen the mixture. The starting adjustment opening for a new unit, or a carburetor that has not been run on the engine, is one full turn open on both the high speed and idle mixture screws. The idle speed screw should be adjusted to open the throttle shutter a small amount.

Open the fuel line shut off valve and close the choke shutter. Open the throttle about one quarter of full travel and firmly pull the starting cord until the engine fires. Open the choke shutter far enough to allow the engine to idle until it has warmed up enough to run continuously with the choke fully open. Do not race a cold engine.

Adjust the idle mixture screw to obtain a smooth, steady idle, and re-adjust the idle speed screw to obtain the idle speed recommended by the engine manufacturer. Recheck the idle mixture adjustment at the recommended idle speed. An over rich idle mixture will cause the engine to fire unevenly and there will be smoke from the exhaust. A lean idle mixture will usually cause backfiring.

The high speed mixture screw should be adjusted to give maximum Engine RPM under normal full load conditions. Engine speed will decrease with either a too lean or too rich a mixture. NOTE: Too lean a mixture will result in engine overheating and poor lubrication.

The above procedure need not be repeated each time the engine is started. The adjustments will remain in position and will not require frequent re-adjustment.

After the carburetor has been correctly adjusted, the engine should start easily. To start a cold engine, close the choke shutter, open the throttle about one quarter of full travel, turn key to start position for electric start AMPHICATS or firmly pull the starting cord for manual start AMPHICATS until the engine starts, open the choke far enough to allow the engine to idle until it has warmed up and can run continuously with the choke fully open.

CAUTION: Do not force mixture screws into their seats!

c) *Battery (On Electric Start Models)*

Before disconnecting any electrical components, disconnect the battery cables. When reconnecting the cables observe polarity. Connect the positive leads to the yellow terminal. Connect the ground leads to the other terminal. Reverse polarity will damage the rectifier assembly.

If the battery does not maintain charge during normal operation, check the fuse in the rectifier assembly. For optimum battery performance do not operate the lights during daylight hours. This maintains maximum charge rate. The battery charging system will not maintain the battery at full charge during repeated engine start, run and engine re-start cycles. During cold weather operation, excessive night operation or during repeated start-re-start cycles, charge the battery during non-operating periods.

When fastening or tightening battery box straps refer to Figure 6.

Figure 6 — Battery Box Straps

d) *Chain and Transmission Guards*

The hinged - removable seat and foot well act as guards. They are easily removed to inspect and/or service the AMPHICAT.

e) *Gas Tank*

To drain the fuel tank, turn the fuel ON-OFF Valve off, pull fuel line off at the ON-OFF Valve, turn the ON-OFF Valve on and drain into suitable container. Replace fuel line and turn ON-OFF Valve OFF. Remove any spilled gas with dry cloth. Check for leakage when the fuel tank is refilled. See Figure 3, Page 5.

f) *Axle Chain Adjustment*

The four axle drive chains are adjustable in order to take up slack caused by normal wear. The center axles on each side of the vehicle are fixed and all adjustments are made with the adjustments provided on the front and rear axles. Adjustable pillow blocks are provided on the inner and outer frame members on each axle and both pillow blocks on each axle must be adjusted together to maintain proper alignment between the drive sprocket (center axle) and the driver sprocket (front or rear axle). Adjust the four axle chains as follows:

1) Remove the clevis and hair pins from the axle and loosen the four (4) upper Bearing Block bolts, see Figure 7.

Figure 7 — Axle Chain Adjustment

2) Remove the front and rear tires and axles and loosen their four (4) side bearing block bolts, see Figure 8.

Figure 8 — Axle Chain Adjustment

3) Tighten the bearing block adjustment nuts to obtain as little slack as possible in each chain without pre-loading chains. Adjust the inner and outer pillow blocks together to maintain alignment between the drive sprocket and driver sprocket. See Figure 9.

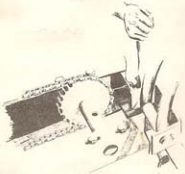

Figure 9 — Axle Chain Adjustment

4) Tighten the bolts loosened in steps (1) & (2) above and assemble the tires and axles with the clevis and hair pins.

g) *Idler Chain Adjustment*: (See Figure 10).

The power drive (Idler) chains are adjusted by the adjustable supports located on each end of the Idler Shafts. The adjustments consist of a pair of take up supports in the horizontal plane to adjust the transmission, to Idler Shaft chain and a pair of take up supports in the vertical plane to adjust the idler shaft to center axle chain. It is important

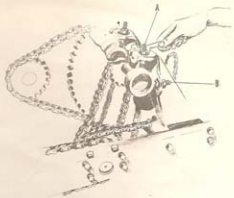

Figure 10 — Idler Chain Adjustment

when making adjustments to adjust the take up supports in pairs to maintain alignments between the driver and driven sprockets. Proper alignment should be checked after each adjustment by placing a straight edge across the faces of the adjacent sprockets. The straight edge should lay flat with full contact on the face of the sprocket.

To make adjustments, (1) loosen the jam nuts on the take up supports, located top and front of the idler shaft support bracket (See "A" Figure 10), (2) adjust the nuts located bottom and back of the idler shaft brackets (See "B" Figure 10), (3) Retighten the jam nuts loosened in step (1) above, (4) check for sprocket alignment using a straight edge, (5) repeat the above steps, if necessary to provide proper chain tension and sprocket alignment. The chains should have as little slack as possible without pre-loading the chains.

h) *Control Lever Alignment*

The control levers have been adjusted at the factory but may require re-adjustment to compensate for normal wear or to suit individual operators.

Adjust each of the two control lever connecting rods as follows: (See Figure 11.)

(1) Remove the connecting rods from the transmission linkage by removing the inner hair pin and flat washers.

(2) Loosen the jam nuts at the control lever end of the connecting rod.

(3) Rotate the connecting rods as required until both control levers have the same forward position and are within comfortable reach of the operator. Be sure that the connecting rods are rotated one complete turn at a time so that the rod ends will be in proper alignment to be reinserted into the transmission linkage.

(4) Tighten all jam nuts.

(5) Insert the connecting rod end into the transmission linkage and replace the inner hair pin. Be sure that one flat washer is positioned between each hair pin and the transmission linkage.

(6) Check travel of the control levers for nine (9) inches ± ½ inch from full forward position to full brake position. This measurement is made at the top end of the handle. Adjust the brakes to obtain proper travel. See (h) below for brake actuators adjustment.

(7) Check operation, readjust the control levers and/or the brake actuators as required.

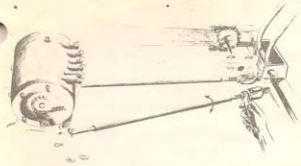

Figure 11 — Control Lever Alignment

i) *Brake Adjustment*

The brake actuators have been adjusted at the factory but may require re-adjustment for normal wear or if the control levers have been adjusted, see (g) above. Adjust each of the two brake actuators as follows: (See Figure 12.)

1. Remove the clevis and hair pins from the right or left hand brake actuator and corresponding upper brake link.
2. Remove the hair pins from the rod - upper - pivot.
3. Slide the rod - upper - pivot to right or left until it is clear of the upper brake link and rotate the upper brake link until it is clear of the brake actuator.
4. Rotate the brake actuator clockwise to decrease travel and/or tighten the brakes and counter clockwise to increase travel and/or loosen the brakes. Each turn will cause an increase or decrease in travel of approximately 3/8 inch at top of the handle and will change the length of the actuators approximately 3/64 of an inch, see paragraph j) and Figure 12 below. Rotate the actuators in half or full turn increasements so that the actuators will be in alignment to allow the clevis pins to be reinserted.

Figure 12 — Brake Adjustment

j) *Clutch and Reverse Adjustment*

The clutch and reverse actuators have been adjusted at the factory but may require re-adjustment for normal wear. Indication of the need to re-adjust the clutches is as follows:

1) A tendency to turn right or left when the vehicle is being driven forward with both clutches fully engaged. *NOTE* If tires are not evenly inflated this would be a natural tendency. See Tire Inflation Page Nine (9).

2) Loss of drive wheel power where making a turn from a standing position i.e. One brake engaged and opposite clutch engaged. Vehicle will not turn in the direction of the braked side.

3) Loss of power when climbing fairly steep grades with normal loads.

To Adjust the Clutch and Brake Actuators, proceed as follows:

1) Refer to Figure (13). The 5/8 dimension on the clutch actuators is with the clutch fully engaged (handles full forward). The 1-1/8 dimension on the reverse actuator is with the reverse fully engaged (Foot lever fully engaged), and the 1-1/4" on the brake actuator is with the brake fully engaged (handles full back). *Make a note of the actual measurement on each of the actuators before proceeding.*

2) Rotate the right hand idler sprocket until the 1" diameter hole is opposite the upper pivot rod.

3) Remove the hair pins from the upper pivot rod.

4) Remove the hair pins and clevis pins from the actuator ends. Remove the cotter pins from the clutch actuators.

5) Slide the upper pivot rod from the assembly (thru the hole in the sprocket) until all of the upper linkages can be pivoted free of the control actuators.

CAUTION: Do Not attempt to start the engine or move the vehicle when the upper pivot rod is protruding thru the hole in the sprocket. Breakage of the transmission pivot rod support will occur.

6) Make the required adjustments, each complete turn on the actuators will change the length noted in step one by approximately 3/64 of an inch. Turn to the right (clockwise) to decrease the measurement noted in step one. Turn to the left (Counter clockwise) to increase the measurement noted in step one.

7) To re-assemble follow the above steps 5 thru 1 in reverse.

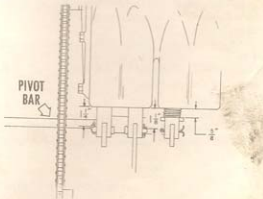

Figure 13 — Clutch and Reverse Adjustment

k) *Tire Inflation*

It is very important for maximum performance, and to avoid undue stress on the drive components, that all 6 tires are inflated to the same diameter. Evry 25 hours of operation or if any noticable difference in tire inflation is apparent, the unit should be blocked up to accurate measurement can be made. Then measure with tape the circumference of tire at center line, which if correct, should be between 62½" and

63". (See Figure 14) If the unit is operated excessively on pavement or hard packed surface extra care should be taken to maintain constant tire diameter. TIRE DIAMETERS BEING EVEN IS OF UTMOST IMPORTANCE! In case of puncture, use cold patch as you would repair an innertube

Figure 14 — Tire Inflation

l) *Body Maintenance and Draining*

The ABS surface should be cared for in the same manner as an automobile finish.

1. Cleaning: The ABS surface may be cleaned using mild detergents or most household cleaners. Strong soaps and abrasives (Cleansers) should not be used. Dirt or grime that has been ground into the surface may be removed with a good grade of rubbing or polishing compound. Rinse well after washing.

CAUTION: Do Not use paint thinners or carbon tetrachloride to remove tar or for general cleaning as such solvents may soften ABS.

2. Waxing: The ABS surface may be waxed at any time and requires no special method. The ABS surface should be washed before waxing. Automotive and household waxes may be used to clean ABS.

A Paste wax will provide the best protection from abrasion and minor scratches because dirt and grime slide off a well-waxed surface. The ABS may become slightly dulled or faded after a long exposure to weather. The surface may be easily restored to its original luster and gloss by cleaning with a suitable rubbing compound before waxing. The color will not rub off because it goes all the way through the material.

3. Repairing: Your AMPHICAT body can be easily repaired by hot air welding, by soldering or with bonding agents. Contact your AMPHICAT dealer for advice on the lowest cost - best method to use.

Hot Air Welding

Hot air welding requires special equipment and is fully described in a brochure titled "Hot Air Welding of CYCOLAC ABS Plastic" available through your AMPHICAT dealer.

Soldering

Most rips, tears and cracks can be repaired with relative ease by using a conventional heavy duty electric soldering iron. Inexpensive soldering rod is available through your AMPHICAT dealer in 100 foot coils in the same color as the AMPHICAT body. Thin slivers of scrap CYCOLAC may also be used as soldering rod.

Apply the hot soldering iron at the beginning of the crack to be repaired and slowly feed some rod into the crack. it flows and fuses easily and makes a neat repair. DO NOT USE A TORCH OR OTHER OPEN FIRE!!

A hole may be repaired by using a larger piece of CYCOLAC behind the hole and using the soldering iron along the edges.

Stress Relief

Internal stresses in CYCOLAC may cause small white spots or so-called stress marks to appear. These marks will disappear when the internal stresses are relieved by applying hot air to the stress area. A propane torch may also be used for stress relief. CAUTION: Be sure the flame is kept as far from the body as possible, start with the flame far away and gradually bring closer until the stress area becomes warm.

Bonding Agents

Special bonding agents are available through your AMPHICAT dealer. They are usually a two-part glue mixture. Holes may be patched in the same manner as described in soldering holes above.

NOTE: Do not attempt to separate the upper body from the lower body, because these two parts have been bonded at the factory. The technique used produces a strong bond that any attempt to separate the upper and lower sections will only result in damage to the plastic. If you should need a complete body, it would be shipped from the factory already bonded together.

4. Draining Body: The body may be drained by elevating the front of the unit and removing the drain plug at the rear of the AMPHICAT.
Be sure drain plug is replaced before operating the AMPHICAT.

m) *Rectifier Fuse*

The rectifier contains a 5 ampere fuse which is the same as used in the Opel automobile. It may be obtained from any authorized Buick-Opel dealer as their part number OPEL 5 No. 1238300. To replace fuse disconnect positive leads from the positive (yellow) terminal of the Battery and then remove the rectifier cover by releasing its retaining spring. Replace fuse — with CORRECT TYPE ONLY — and reassemble rectifier cover. THEN, replace Battery leads. DO NOT attempt to replace fuse without disconnecting battery or the fuse may be shorted and blown when replacing rectifier cover.

n) *Transmission Fluid Level*

The Transmission in your AMPHICAT is equipped with a vented pipe plug (53-510765) at the top and a solid pipe plug (72-103866) at the lower rear.

To check the fluid in the transmission, remove the plug in the rear. The fluid should be level with the bottom of the tapped hole. If it is necessary to add fluid, leave the plug out and add just enough to raise the fluid to the proper level.

CAUTION: To prevent over-filling, never add fluid without first removing the lower rear plug.

o) *Fuse Assembly - 20 Amperes* (Electric Start Only)

A 20 amperes fuse is located within a fuse holder which is pre-assembled into wire harness lead located between battery and ignition switch for electrical protection. In case of blown fuse, disconnect fuse holder and replace with a new 20 amperes AGC fuse, only after determining cause of failure.

Figure 15 — Carburetor Air Filter

MAINTENANCE AND LUBRICATION SCHEDULE

CAUTION: It is recommended that before starting out on a trip of any duration or away from service facilities that your AMPHICAT be given a visual inspection, lubrication and check over, as to chain tension, tire circumference, wheel nut tightness, engine starting, gas level and that all nuts, bolts, etc., are tight and secure. Also it is advisable to make certain that your basic tool kit and this manual are in your vehicle.

MAINTENANCE	TIME	REFERENCE	LUBRICATE	TIME	REFERENCE
Dealer 10 hr. Insp.	10 Hrs.		Chains	25 Hrs.	SAE-30 oil or Dri-slide
Tire Inflation	25 Hrs.	Inflate to 63" Circ.			
Wheel Nut Tightness Check	25 Hrs.				
Engine Maintenance		See engine manual	Repack axle bearings	50 Hrs.	Only if replaced or disassembled
Chain Adjustment	50 Hrs.	Page 8	Felt Pad On Points	200 Hrs.	BOSCH FT1V4
Brake, Clutch and Reverse Adjustments	50 Hrs.	Page 9			
Battery Check	50 Hrs.	Electric Start Only	Transmission Level Check	50 Hrs.	Automatic Transmission fluid DEXRON®
Fuel & Air Filter Cleaning	50 Hrs.	Or As Needed Figure 15			

PART IX — STORAGE INSTRUCTIONS

IMPORTANT: It is of the utmost importance to perform an annual check to prepare the AMPHICAT for storage. Follow the procedure outlined below.

1. CARBURETOR

Drain by disconnecting the fuel line. Start the engine; run until the carburetor is dry. Replace the fuel line.

2. CYLINDER

Remove the spark plug, pour one tablespoon of oil (SAE 40 or 30) through the spark plug hole and turn engine over a few times to distribute the oil on the piston and the cylinder wall. Replace the spark plug.

3. FUEL TANK

During storage, completely drain fuel tank. If oil and gas mixture is left standing for long periods, it becomes stale and gummy. See Figure 3, Page 5.

WARRANTY

Magna American Corporation warrants, to the original purchaser, each new AMPHICAT of our manufacture to be free from defects in material and workmanship under normal use and service, our obligation under this warranty being limited to making good at the factory any part or parts thereof which shall within 90 days from date of purchase, be returned to us with the transportation charges prepaid, and which our examination shall disclose to our satisfaction to have been thus defective; this warranty being expressly in lieu of all other warranties and representations expressed or implied and of all other liabilities in connection with the sale or use of any AMPHICAT.

THIS WARRANTY APPLIES ONLY TO AMPHICATS MANUFACTURED BY MAGNA AMERICAN CORPORATION AND SOLD ONLY IN THE UNITED STATES

This warranty shall not apply to any AMPHICAT which shall have been repaired or altered outside the factory in any way so as to affect its stability, nor which has been subject to misuse, negligence or accident, or operated in any other way than in accordance with our operating and maintenance instructions. Nor does the warranty extend to repairs made necessary by the use of inferior parts or accessories, or by the use of types of accessories not recommended, nor does it apply to normal wear and tear.

We make no warranty with respect to trade accessories not of our manufacture, inasmuch as they are usually warranted separately by their respective manufactures. Your AMPHICAT Dealer will handle the following separately warranted items; Carburetor, Engine, Torque Convertor, Tires and Battery.

This warranty does not apply if the AMPHICAT in question has been used by an authorized AMPHICAT dealer or any other person prior to the original retail sale.

To make a claim under this warranty, contact the Dealer from whom your AMPHICAT was originally purchased or the nearest AUTHORIZED SERVICE STATION or Dealer. Defective parts shipped to the factory for our inspection, must show model and serial numbers, and must be shipped transportation charges prepaid.

WARRANTY SERVICE

1. Proof of purchase and completion of 10 Hour Check will be required by dealer to substantiate your warranty claim. Be sure that your AMPHICAT warranty card is mailed promptly and your 10 Hour Check coupon signed upon completion of the 10 Hour Check.
2. All warranty work must be performed by an authorized service station.
3. Service under the new AMPHICAT warranty may be purchased by any authorized AMPHICAT dealer. We suggest that such service be performed by the dealer from whom you purchased your AMPHICAT, because of his personal interest in you.

IDENTIFICATION PLATE

The unit identification plate that contains the model and serial number of your AMPHICAT is located on the Frame near the Torque Convertor. Include complete model and serial numbers when ordering parts.

NORMAL MAINTENANCE SERVICE

Normal maintenance service is the responsibility of the owner. Parts replaced due to normal wear are not considered defective material or workmanship within the terms of the warranty. Individual operative habits and usage contribute to the frequency of need for maintenance service.