

PB16R POWER BUGGY PARTS & OPERATORS MANUAL

The logo for Morrisson, featuring the word "morrisson" in a bold, lowercase, sans-serif font. The letters are black and have a slightly distressed or hand-painted appearance. The logo is centered on the page.

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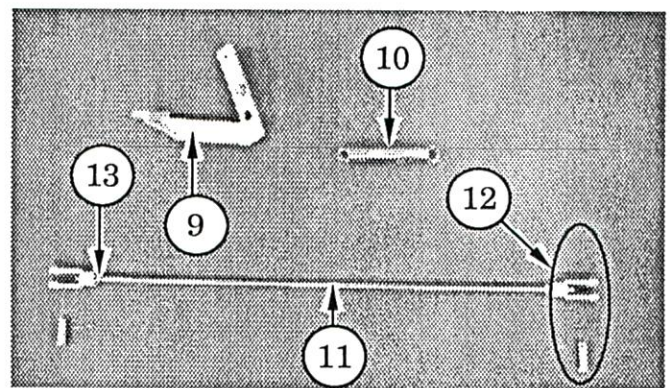
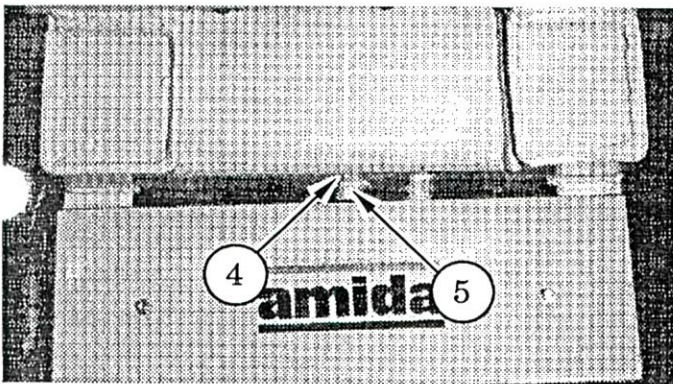
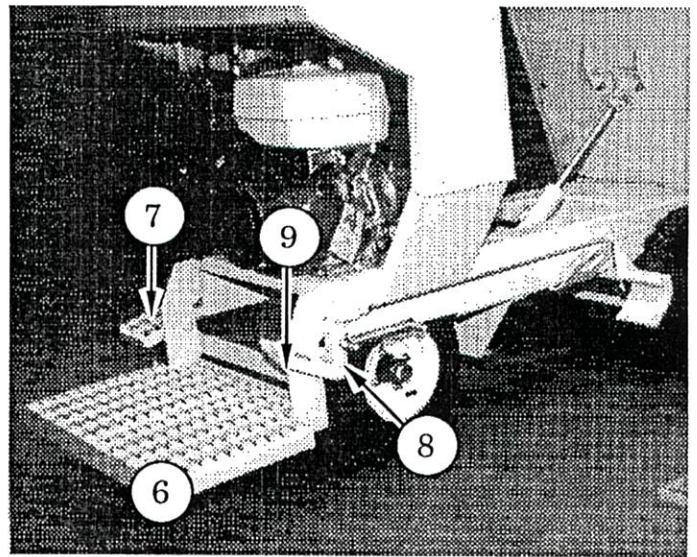
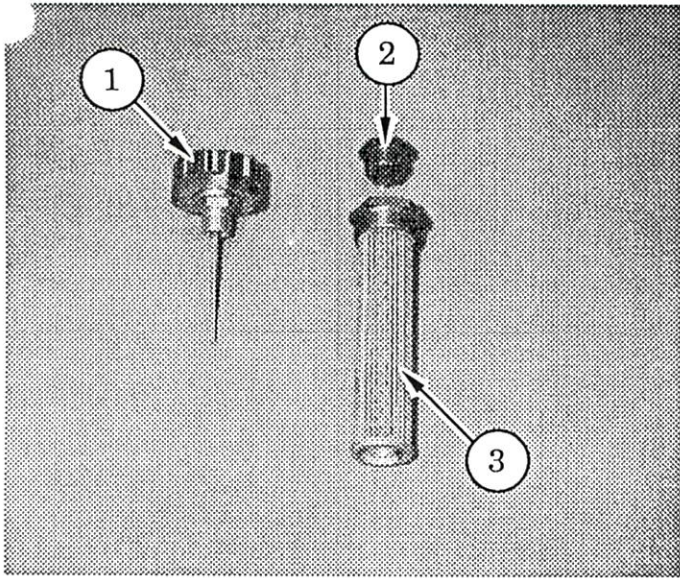
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Important Information

Date of purchase : _____ Dealer : _____

Model number : _____ PB 16R _____ Serial number : _____

Chassis Accessories



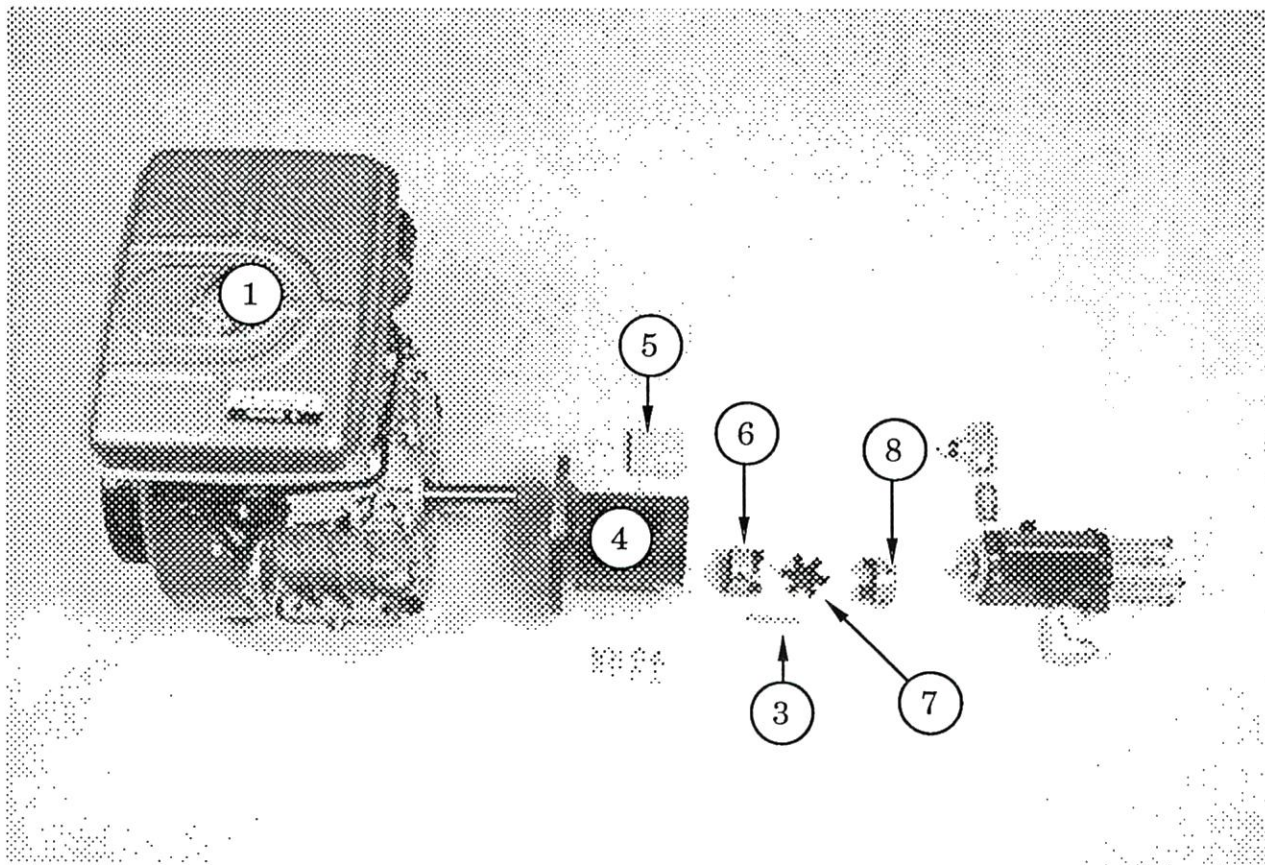
ITEM	PART NO.	DESCRIPTION
1	796050	Breather Cap
2	897345	Hex Head Bushing
3	897350	Hex Filter
4	721015	Nylon Flat Washer
5	981140	Oil Drain Bolt/Plug
6	500090	Riding Platform
7	510475	Dump Foot Pedal

ITEM	PART NO.	DESCRIPTION
8	981180	Foot Pedal Mounting Bolt
9	500080	Emergency Brake Foot Pedal
10	796010	Brake Pedal Spring
11	996140	Linkage Rod
12	981165	Yoke and Pin
13	981170	Linkage Coupler Jam Nut

NOTE:

◆ Most bolts, nuts and washers are standard and may be purchased locally.

Engine Assembly

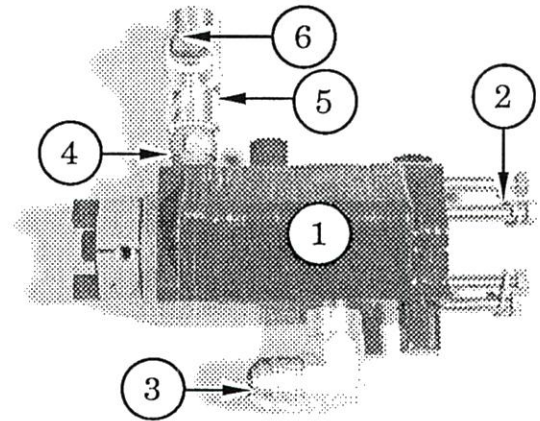
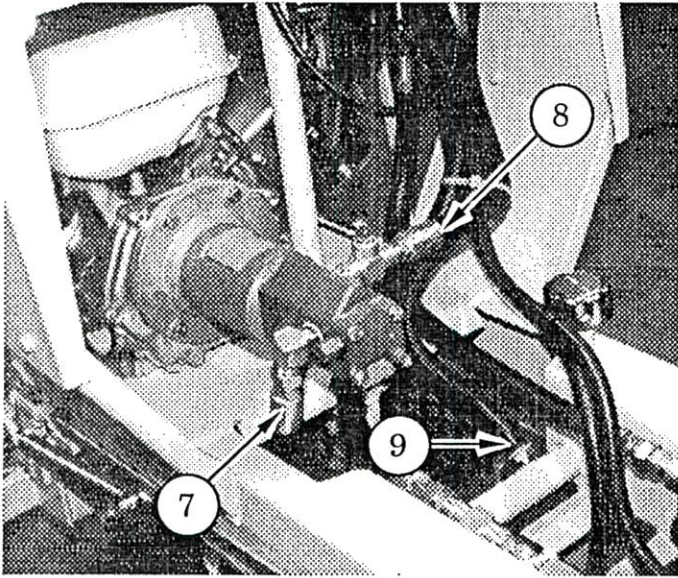


ITEM	PART NO.	DESCRIPTION
1	732030	Wisconsin Sovereign Engine 11HP.
2	732055	Honda Engine 11HP. (not shown)
3	510505	Engine Key Stock
4	743010	Pump Mount Casting
5	800210	Pump Mount Cover
6	760105	Engine Lovejoy Coupler
7	760115	Lovejoy Coupler Spider
8	760110	Pump Lovejoy Coupler

NOTE:

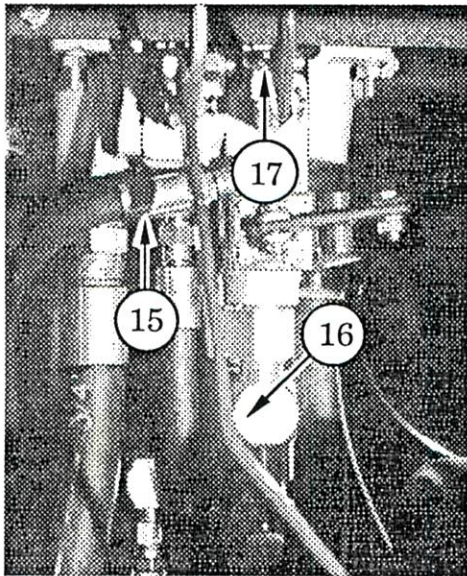
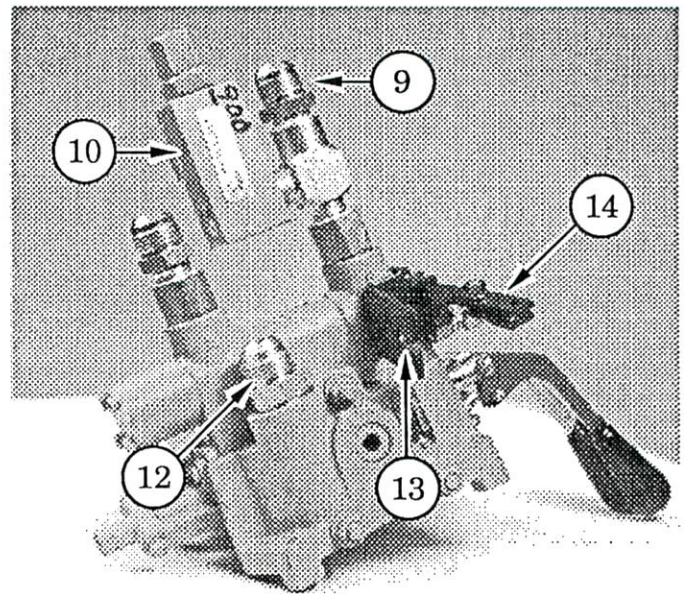
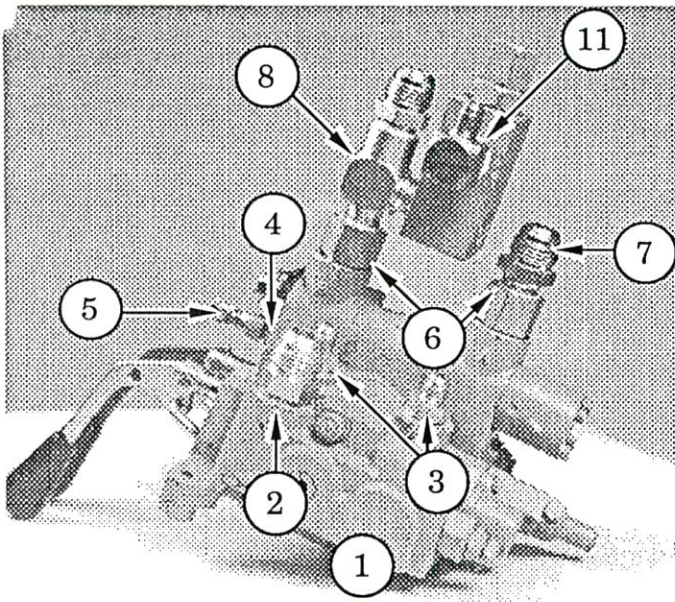
◆ Most bolts, nuts and washers are standard and may be purchased locally

Pump Assembly



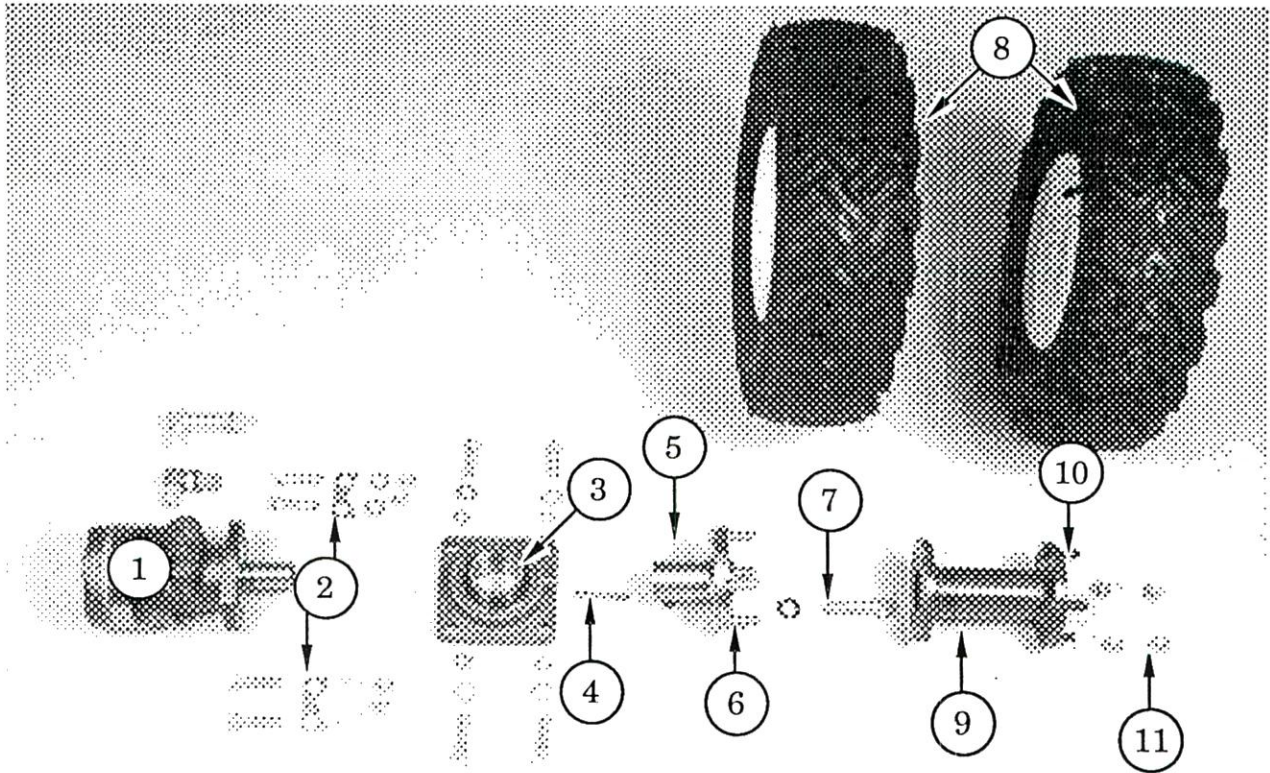
ITEM	PART NO.	DESCRIPTION
1	760285	Hydraulic Pump
2	981200	Pump Mounting Bolts (set of 4)
3	897305	Pump Suction Fitting
4	897205	Male Nipple
5	897200	Pump Pressure Gauge Tee (to add optional gauge)
6	894310	Pressure Gauge Tee Plug
7	490300	Main Suction Hose
8	490060	Pressure Hose
9	490070	Main Return Hose

Main Valve Assembly



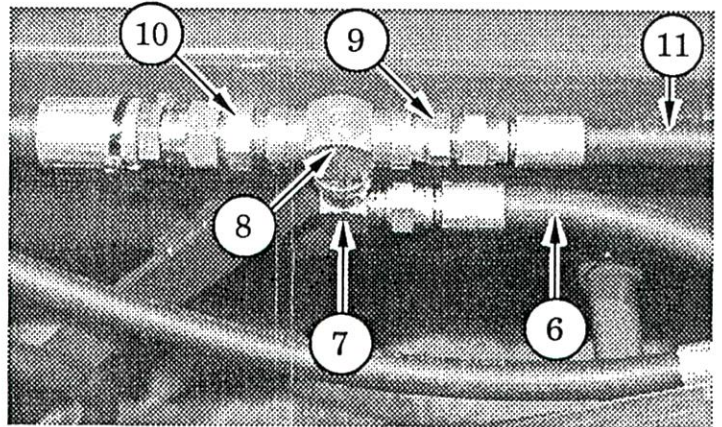
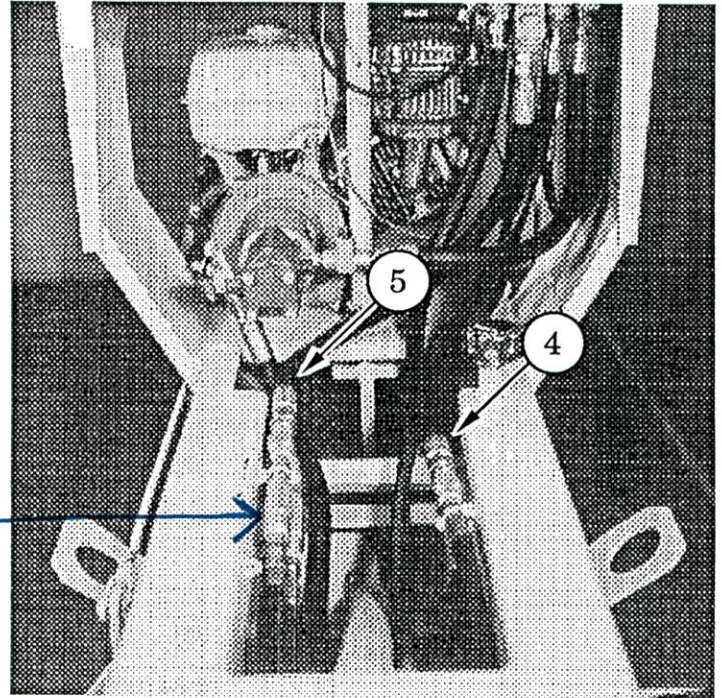
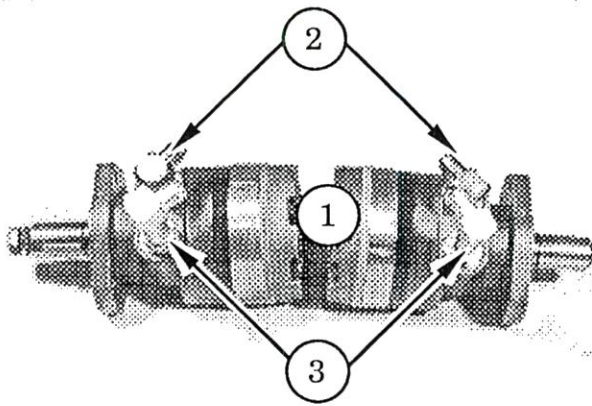
ITEM	PART NO.	DESCRIPTION
1	897015	Valve, Chassis Only
2	897265	Main Inlet O-Ring Fitting
3	897270	Cylinder Port O-Ring Fitting
4	897280	Relief Valve Overflow Port O-Ring Fitting
5	897295	90° Relief Valve Overflow Swivel Fitting
6	897285	Drive Port O-Ring Fitting
7	897275	Reverse Drive Pipe-Hose Fitting
8	897290	Forward Drive Tee Fitting
9	897225	Forward Drive Pipe-Hose Fitting
10	897300	Brake Relief Valve
11	897050	90° Brake Relief Fitting
12	897265	Main Outlet O-Ring Fitting
13	500170	Brake Cable Mounting Bracket (includes 4 mounting screws)
14	510535	Brake Cable Linkage Lever
15	490065	Brake Relief Overflow Hose
16	510470	Foot Dump Linkage Rod
17	981810	S-Hook
18	490010	Complete Valve Assembly (with all fittings & brackets shown)

Drive Wheel Assembly

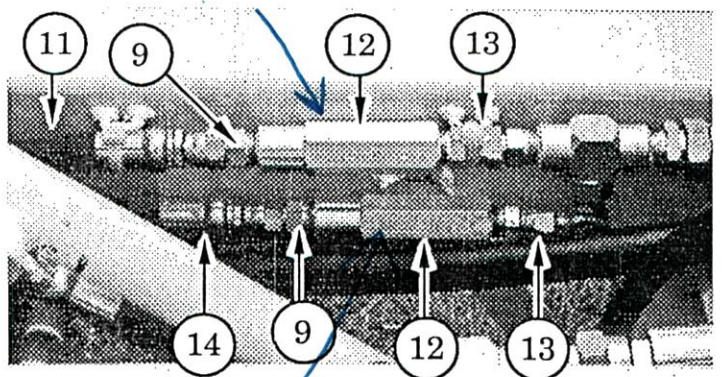


ITEM	PART NO.	DESCRIPTION
1	760145	Hydraulic Motor
2	510390	Motor Spacers
3	760075	Flange Bearing
4	510930	Hub Key Stock
5	500140	Inner Hub (studs included)
6	981190	Press-in Studs (inner hub)
7	981665	Inner Hub Mounting Bolt
8	842015	5.70 x 8 Rim & Tire
9	500145	Outer Hub (studs included)
10	981195	Press-in Studs (outer hub)
11	981160	Outer Lug Nuts

Drive Motor Fittings & Hoses



Right Side

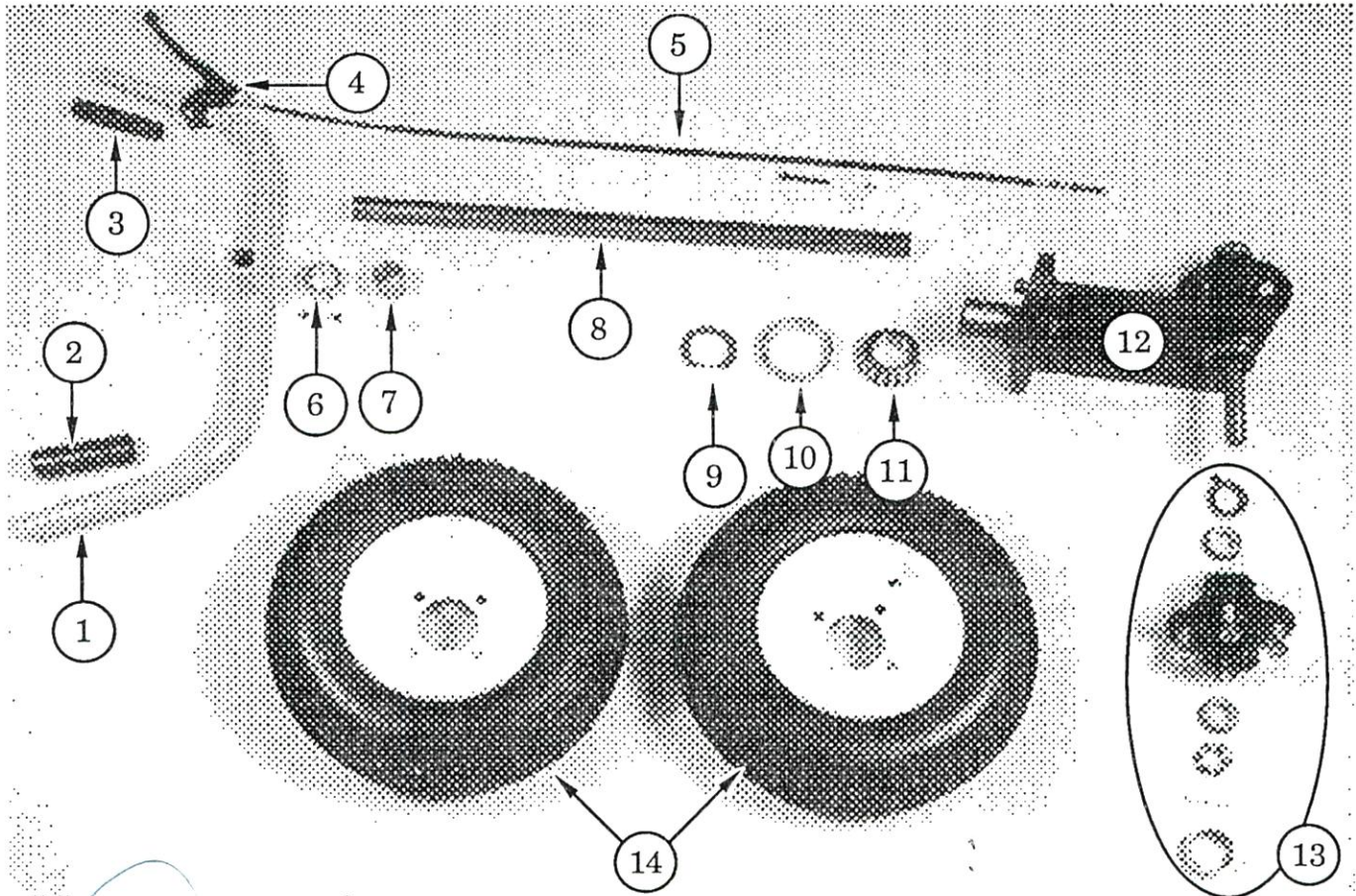


Left Side

ITEM	PART NO.	DESCRIPTION
	1 760145	Drive Motor
	2 897325	Short 45° O-Ring Fitting
	3 897335	Long 90° O-Ring Fitting
*	4 490050	Reverse Drive Hose
*	5 460050	Forward Drive Hose
*	6 490045	Lower Hydraulic Hose, Right
*	7 897215	90° Fitting
*	8 897200	Tee Fitting
*	9 897220	Male Nipple, 8-8
*	10 897225	Male Nipple 12-8
	11 490035	Upper Hydraulic Hose
	12 897865	Valve, Flow Control
	13 897285	Male Pipe / Female Swivel Fitting
	14 490040	Lower Hydraulic Hose, Left

* Items 4 - 10 can be used on either side of chassis.

Steering Column Assembly

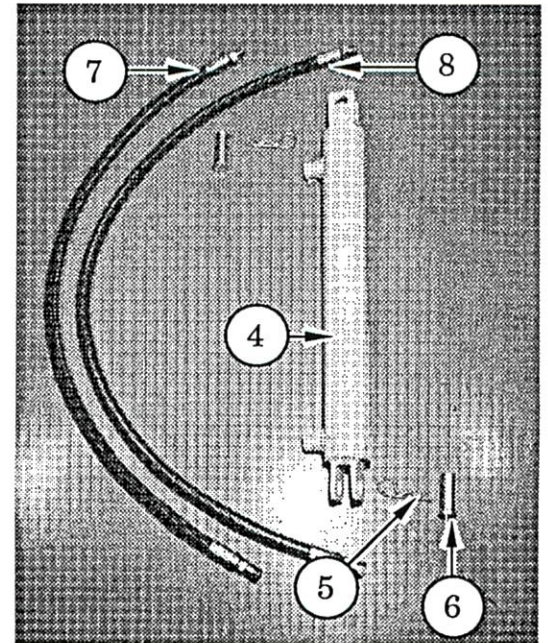
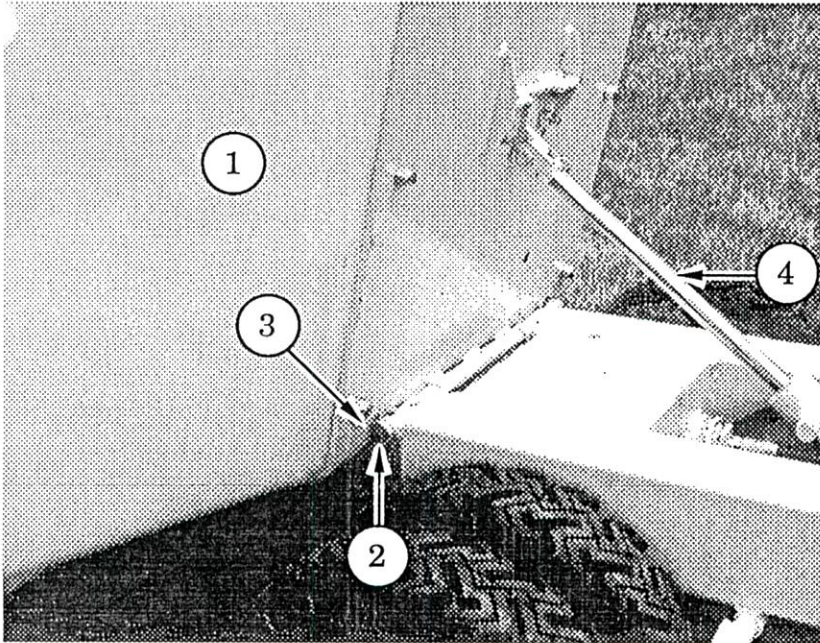


	ITEM	PART NO	DESCRIPTION
	1	500155	Handlebar
	2	796030	Large Handle Grip
	3	796035	Small Handle Grip
	4	796040	Clutch Lever
	5	796045	Cable
	6	796060	Steering Shaft Collar
	7	760155	Oilite Bushing
	8	510115	Steering Shaft
	9	510485	Dust Cover Washer
	10	760165	Tapered Bearing Race
	11	760170	Tapered Cone Bearing
	12	500100	Axle Strut Assembly
	13	760160	Spindle Hub Assembly
	14	842010	4.80 x 8 Tire & Rim

NOTE:

◆ Most bolts, nuts and washers are standard and may be purchased locally

Bucket & Cylinder Assembly

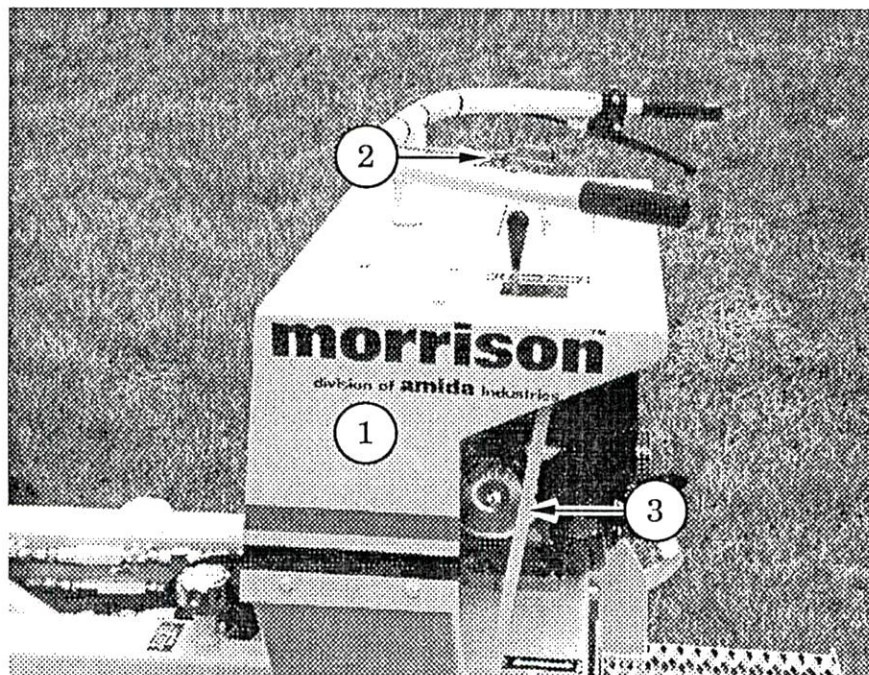


ITEM	PART NO.	DESCRIPTION
1	500150	PB 16R Bucket, Steel
	490260	PB16R Bucket, Ploy
2	510480	Bucket Hinge Rod
3	796065	Hinge Rod Collar
4	760150	Hydraulic Dump Cylinder
5	981270	Cylinder Clevis Pin
6	981265	Cylinder Bridge Pin
7	490030	Cylinder Hose Short
8	490025	Cylinder Hose Long

NOTE:

◆ Most bolts, nuts and washers are standard and may be purchased locally

Engine Shroud & Throttle Assembly



ITEM	PART NO.	DESCRIPTION
1	500110	Engine Shroud
2	796080	Throttle Handle & Cable
3	510472	Linkage, Dump Pedal

510420

NOTE:

◆ Most bolts, nuts and washers are standard and may be purchased locally

REV. DATE CHANGE

REV. DATE CHANGE

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REV. DATE CHANGE

REV. DATE CHANGE

REV. DATE CHANGE

① 11 HP engine 1100 PSI
② 16 GPM pump
③ 2500 PSI relief valve

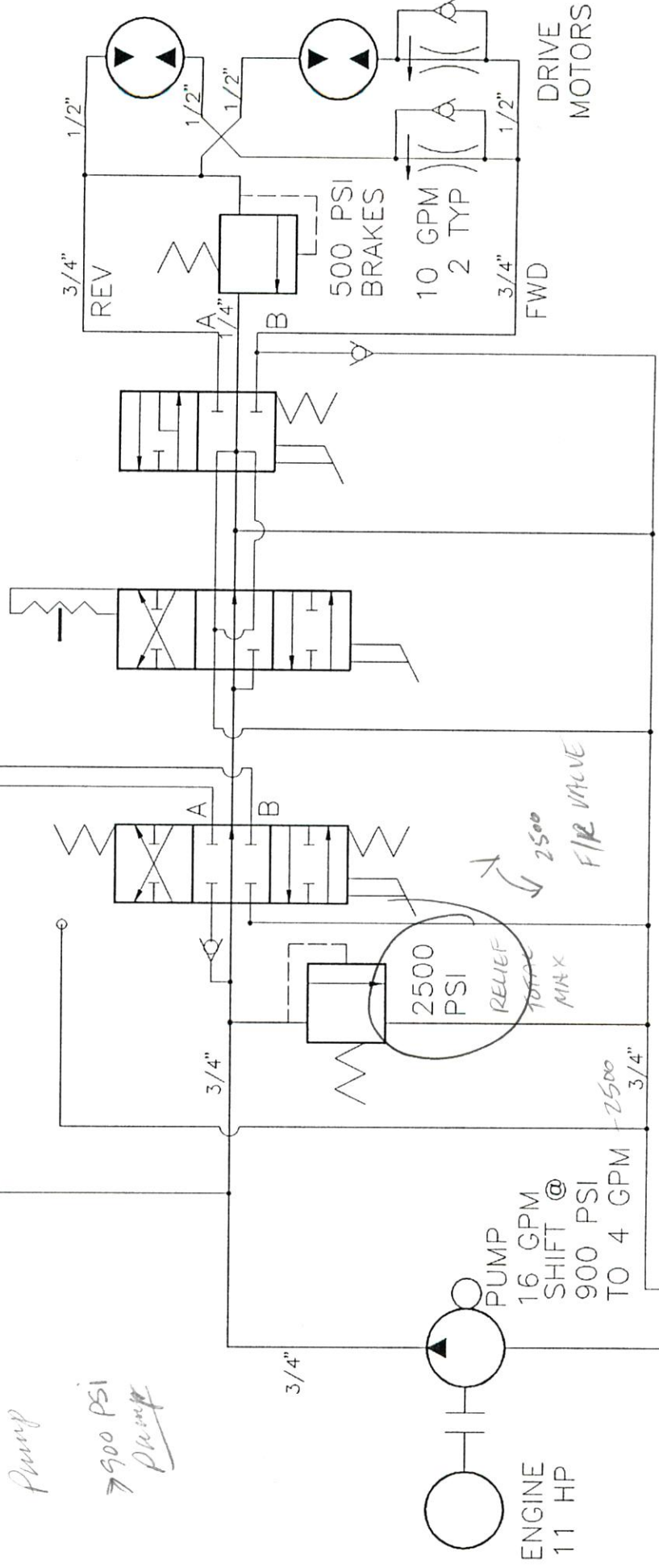
Pump
7900 PSI
Pump

BUCKET
CYL 2X15

3/8"

3/8"

ACCESSORY
OUTPUT



BUCKET DUMP/LOWER FWD/NEU/REV DRIVE DRIVE SPEED

amida INDUSTRIES, INC.
590 HUEY Rd, ROCK HILL, S.C.
Ph. (803) 324-3011 FAX 366-1101

PB16R W/FLOW CONT & ACC. OUT
APPR BY *cmf* WHERE USED PB16R
DR BY GB DATE 11-19-90 DWG M1213

PB 16R OPERATORS MANUAL

Congratulations on choosing the **morrison** Power Buggy. A few moments spent reading this manual will reward you with complete operating knowledge of your Power Buggy and years of service you expect from your **morrison** equipment. **Welcome to the morrison family of fine concrete handling products.**

SPECIAL NOTE !

Before operating, be sure to read the engine manufacturer's instructions.

FILLING THE BUGGY'S HYDRAULIC RESERVOIR

Your Power Buggy's hydraulic tank has been filled at the factory with 10W/40 standard motor oil. We do recommend however, that you do the following procedure before operating your new Power Buggy.

1. RAISE BUCKET: To simplify the filling of the buggy's oil tank, press down & back on the bucket dump pedal, (See Fig.# 1) and at the same time manually lift the bucket to the full dump position. (This will probably take a helper).

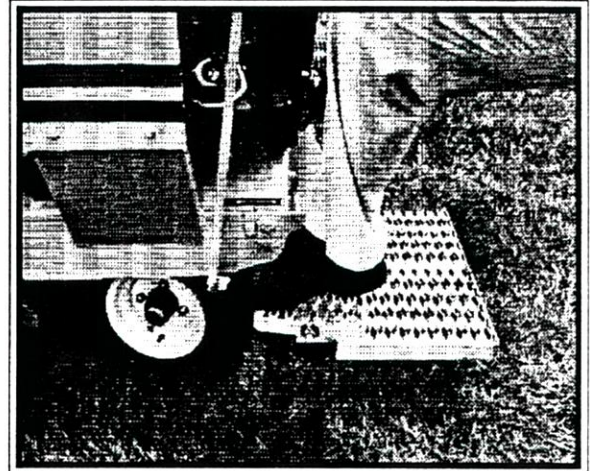


Figure # 1

2. FILLER CAP: To check the oil level of the buggy's oil tank, (See Fig. # 2) raise the bucket and use the marks, as indicated, on the fill cap dip stick. These marks are correct with the bucket raised, and without threading the cap back into the fill neck tube.



Figure # 2

COLD WEATHER NOTE...

If your buggy is to be operated at or below 20° continuously, we recommend replacing the SAE 10W/40 oil a lighter weight oil, SAE 10W/20 or equivalent. This thinner fluid will make cold weather operating easier and give you better winter performance. Remember as warm weather returns, change back to 10W/40 motor oil.

3. FILLING THE LINES: Start the engine. With the bucket still in the full dump position, slowly down & back on the foot dump pedal (See Fig.# 3) to partially fill the dump cylinder.

NOTE: If no action takes place after approximately 10 seconds, STOP and call the factory! Next (with filler cap removed) slowly jog the dump pedal in the forward & down direction to lower the bucket. (**CAUTION:** Stay clear of the bucket the first few times you lower the bucket as it may fall rapidly, which is normal. Smooth controlled bucket return will appear as soon as all air is purged from the lines. After dumping the bucket several times, check the oil using the same procedure as described on page eleven.

CAUTION...NOTE...CAUTION

Maintaining the proper oil level in the buggy is VERY important, so check it often !!

DO NOT overfill with oil since that may cause too much hydraulic pressure to build up which may lead to hydraulic pump "O" ring and gasket failures.

A low oil level may affect the buggy's braking power. Your buggy uses hydraulic "back pressure" in it's braking system. Low oil levels reduce this "back pressure" especially when the buggy is working on inclines.

CHECK OIL LEVEL EVERY DAY !!!

4. BUGGY CONTROLS: Your buggy is equipped with a double flow-control valve (See Fig.# 4) one side of which controls the direction of the drive wheel motors, while the other side controls dump action.



Figure # 3

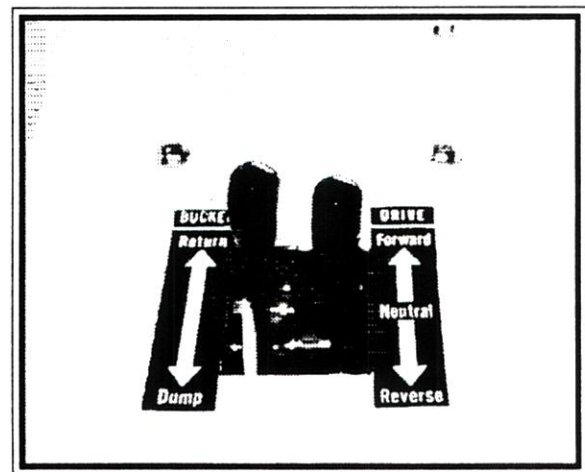


Figure # 4

5. DIRECTION CONTROL: Buggy movement is controlled by the position of the direction lever (See Fig.# 4) in coordination with the clutch/brake lever (See Fig.# 5). When the direction lever is pushed all the way forward, the buggy will move forward as the clutch/brake lever is activated. When the direction lever is pulled all the way back, the buggy will move in reverse as the clutch/brake lever is activated. You will notice that there is a middle position in the direction lever; this is the neutral position. The buggy is restricted to manual movement only in neutral.

6. CLUTCH/BRAKE LEVER: This lever is located under the left handle grip, (See Fig.# 5) and acts as a clutch and a brake. Squeezing the lever will cause the buggy to start in motion. The more you squeeze the lever the faster the buggy will travel until top speed is reached. As you release the lever, the buggy will slow down. The buggy will stop when the lever is released.

SAFETY NOTE: *The clutch / brake lever serves as a deadman brake. If your hand should slip off the buggy handle while you are moving the buggy will come to an abrupt stop.*

7. BUGGY MOVEMENT: We recommend you take a few moments to get the feel of your new buggy before you put it to work. To make the buggy move forward, set engine throttle (See Fig.# 6) to a middle position, push the direction lever fully forward and slowly squeeze the clutch/brake lever to gradually increase speed. To stop, slowly release the lever. To travel in reverse, pull the direction lever to the full back position and slowly squeeze the clutch/brake lever.

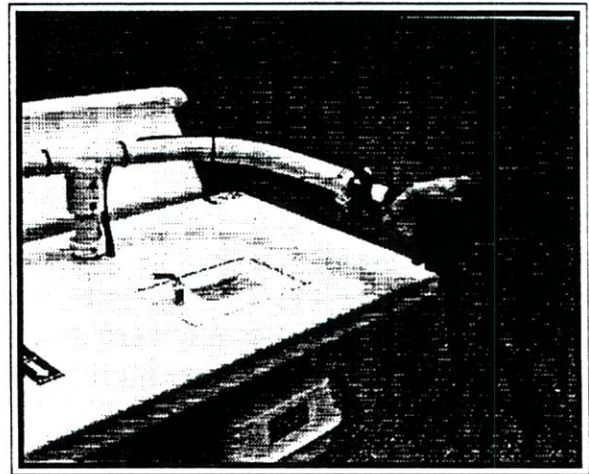


Figure # 5

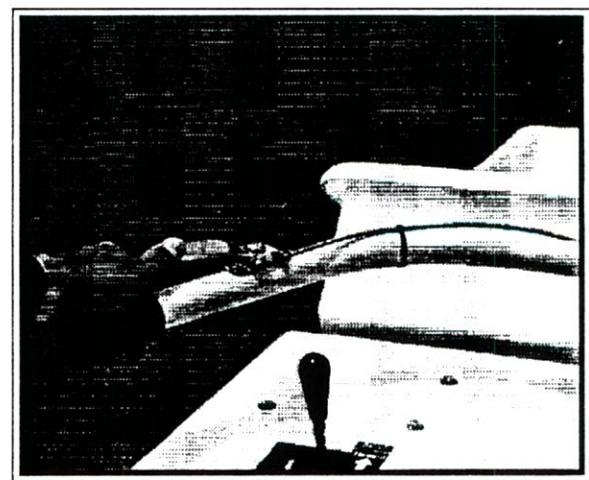


Figure # 6

8. FOOT BRAKE: While the clutch/brake lever does most of the braking, your buggy is equipped with a foot brake for extra braking control under special conditions (e.g. going downhill with a heavy load). The foot brake (See Fig.# 7) is spring loaded and will release when pressure is removed from the pedal.

9. DUMPING: To dump, press forward & down on the foot dump pedal attached to the operating platform (See Fig.# 8) . To return the bucket, push the foot pedal fully down toward the rear of the buggy, until the bucket rests on the chassis.

GENERAL CAUTION

Your buggy responds very quickly to the controls. Slow, smooth, controlled operation is the key to safe buggy handling. For your personal safety and comfort, avoid "Jack Rabbit" starts and sudden stops.

10. NARROW DOORWAY OPERATION: In normal configuration your buggy will go through 43 inch or larger doorways. Your buggy can be adapted to go through 32 inch doorways by removing the outside front tires and hub extensions (see Fig.# 9) . Using a 13/16" socket or lug wrench, remove the lug nuts from the outside front wheels, then remove the hub extensions. Reinstall lug nuts on the remaining wheels and tighten. **NOTE:** Removing the outside tires lessens the load capacity of your buggy by 30%. Be sure to reinstall the hub extensions and extra wheels as soon as your narrow doorway work is complete.

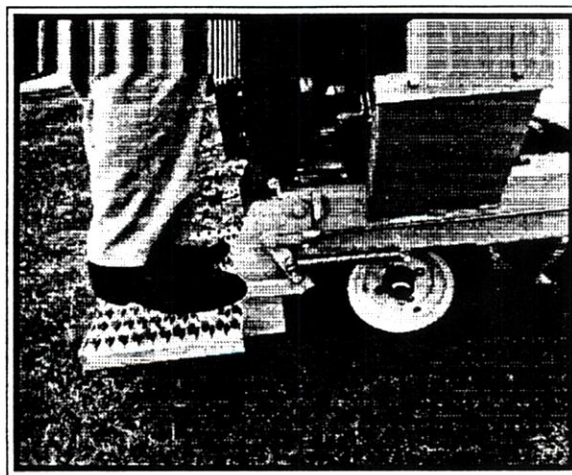


Figure # 7



Figure # 8

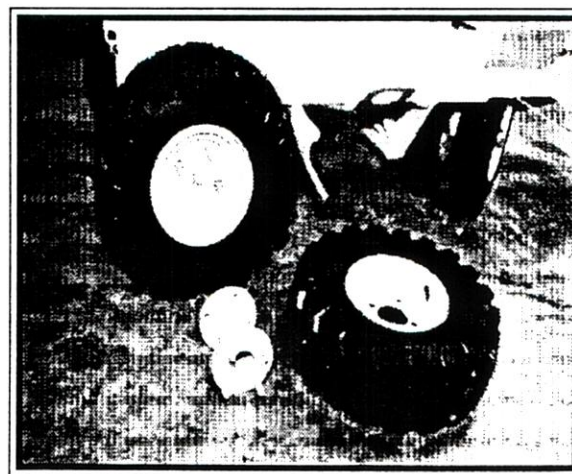


Figure # 9

11. RIDING PLATFORM: Your buggy is equipped with a riding platform that folds out of the way for easy storage. The platform is made out of heavy duty grating to help insure good footing. For safest operation, be sure the soles of your shoes or boots are clean.

12. PARKING: A fully loaded buggy will creep approximately one foot every minute when parked in an incline. If you are going to park the buggy on an incline, we recommend you turn the steering wheels sideways and chock the drive wheels.

MAINTENANCE

1. ENGINE: Follow the manufacturer's recommendations on the care and maintenance of your engine.

2. GREASE FITTINGS: Your buggy has four primary lubrication points. Grease fittings are located on each of the flange bearings between the drive wheels and the chassis. (See Fig.# 10) One fitting is located on the steering shaft where it passes through the chassis. (See Fig.# 11) These fittings should be serviced with a good grade of axle grease every 100 hours of operation. A small amount of light oil should be applied periodically to the drive valve shaft, (See Fig.# 12) assuring smooth drive response.

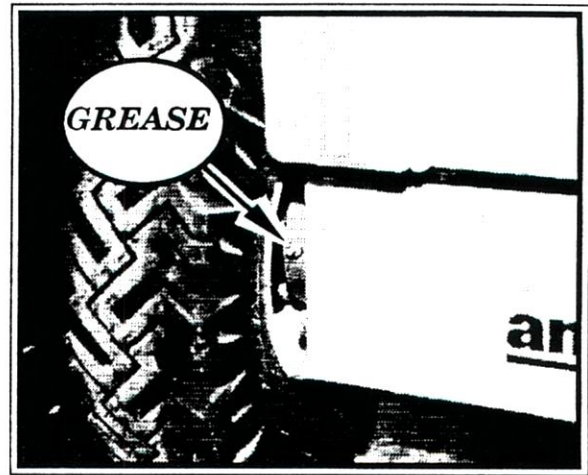


Figure # 10



Figure # 11

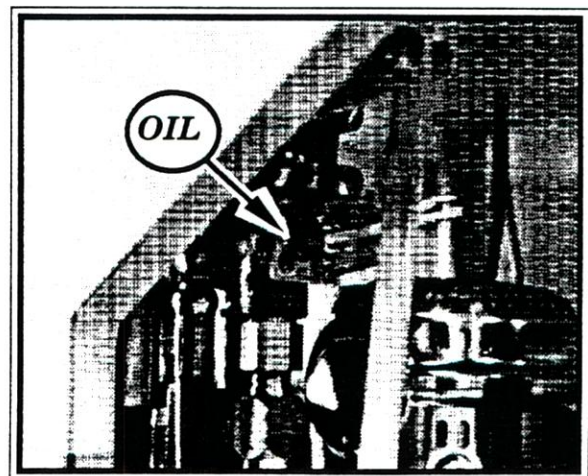


Figure # 12

CAUTION...NOTE...CAUTION

Oil level in the buggy is VERY important!

Overfilling the buggy may cause too much hydraulic pressure to build up which may lead to hydraulic pump "O" ring or gasket failure. A low oil level may affect the buggy's braking power. Your buggy uses hydraulic "back pressure" in it's braking system. Low oil levels reduce this "back pressure" especially when the buggy is working on inclines.

CHECK YOUR OIL LEVEL EVERY DAY!!!

3. FLUID LEVELS: Always check fluid levels before, during, and after operation and replenish as necessary. Replace the Hydraulic oil and filter after every 500 hours of operation, or sooner if required. The drain plug is located on the bottom of the chassis between the drive wheels. (See Fig.# 13) The system filter is located inside the chassis to the right (See Fig.# 14 To service, (shut engine off before removing the suction hose and the bushing). The filter has a large hex head and is removed by unscrewing counterclockwise. Replace the old filter with a new one, re-install the bushing and suction hose. Make sure all connections are tight. For best results we recommend using **TEFLON™** tape on all threaded surfaces.

4. CONTROL CABLES: Periodically check control cables for wear (See Fig.# 15) and replace worn items as necessary.

5. FITTINGS AND HOSES: Check all fittings and hoses periodically. Hoses are subject to periodic replacement depending on abrasions and external chemical reactions. Keeping hoses clean and free of concrete build-up will contribute to long life.

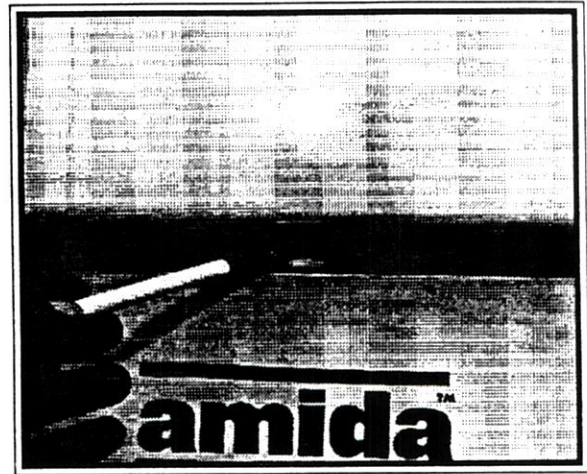


Figure # 13

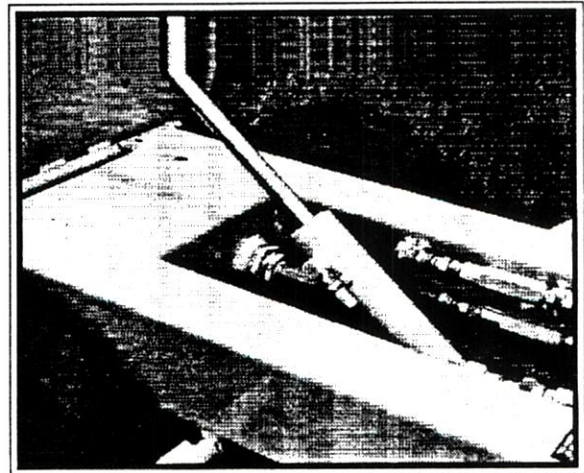


Figure # 14

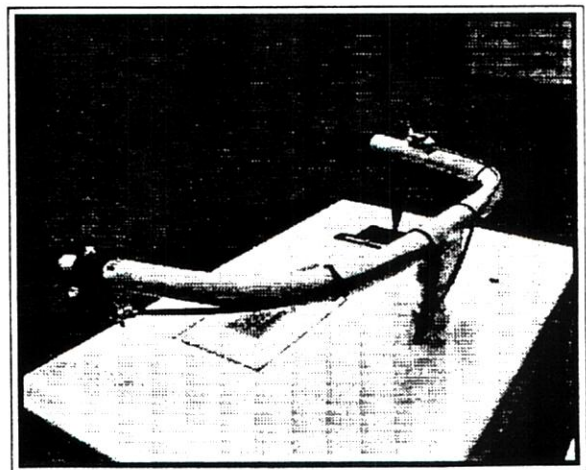


Figure # 15

OPERATING TIPS AND PRECAUTIONS

1. The Power Buggy is a powerful piece of equipment and special care should always be exercised during its operation. Buggy speed is governed by the operator, engine speed, and load size. Always use gradual pressure on the control handle to maintain maximum control.
2. Drive buggy up and down slopes **NEVER** across as buggy will have a tendency to turn over, possibly causing injury to operator.
3. Keep hands, feet, and loose clothing away from bucket during operation.
4. Never allow anyone other than the operator on the riding platform.
5. Never use the power buggy bucket as a personnel transport.
6. Shut engine off during refueling.
7. Always chock the drive wheels when parking the buggy.
8. Maintain a regular maintenance schedule.
9. Keep the buggy clean. Don't let job grime and debris build up. We recommend you spray the bucket with form oil at the beginning of each day and wash it out thoroughly when your finished. A little care will assure a long life for your **morrison** Power Buggy.

PARTS ORDERING INFORMATION

When ordering parts be sure to include the Power Buggy model number, serial number (located on the right side of the chassis between the bucket and the engine shield), part number and/or description of the parts you wish to order. To order by phone: Toll Free (800)-433-3026

Send mail orders or inquires to:
amida Industries
P.O. Box 3147
Rock Hill, S.C. 29732 USA

POWER BUGGY TROUBLESHOOTING GUIDE

PROBLEM	POSSIBLE CAUSE	SOLUTION
<u>Lack of Drive Power</u>	a. Low oil level b. Wrong oil type c. Loose suction hose d. Broken key in drive hub e. Low engine RPM f. Low pump pressure	Check and fill to proper level Drain and refill with 10W40 oil Check and tighten fittings Remove wheel and replace key Check throttle controls Check and replace if necessary
<u>Will Not Dump</u>	a. Low oil level b. Wrong oil type c. Low engine RPM d. System pressure too low e. Weak cylinder	Check and fill to proper level Drain and refill with 10W40 oil Check throttle controls Check pump, replace if necessary Repair or replace
<u>Dump, No Drive</u>	a. Broken key in drive hub b. Bad drive motor c. Drive valve bad	Remove wheel and replace key Repair or replace Repair or replace
<u>Sluggish Operation</u>	a. Pump failing to shift to proper range b. Low pump pressures c. Drive/Brake cable worn	Check sequence valve in pump Pump worn beyond tolerance, replace Check to be certain cable is pulling the drive valve open completely. Replace cable if worn