



# **BRB-2800 MACHINE MANUAL**

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MACHINE MANUAL  
SPECIFICATIONS

BRB-2800

**SECTION 1.1: APPLICATIONS**

**SECTION 1.2: SPECIFICATIONS**

**SECTION 1.3: MANUFACTURER**



### SECTION 1.1: APPLICATIONS

The BRB-2800 is specifically designed to remove coatings and coverings from horizontal surfaces. Coatings may include glue, epoxies and cementitious overlays. Coverings may include carpet, ceramic tile, VCT and wood flooring.

A wide variety of tools are available from Blastpro® for your specific application.

In general, the BRB-2800 uses sharpened spring steel blades along with the weight of the machine itself to perform the scraping function. The variable angle of attack allows for a great deal of flexibility when dealing with different floor coatings.

### SECTION 1.2: SPECIFICATIONS

Dimensions (L x W x H)	74" x 30" x 68" (1880mm x 762mm x 1727.5mm)
Weight	2800 lbs (1270 kg)
Fuel	Liquid Propane
Fuel Capacity	33 lb.
Engine	27 HP Kohler
Electrical System	12 VDC
Blade Actuation	Hydraulic
Steering	Hydraulic
Ground Drive	Hydraulic
Blade Widths	2" through 36"

### SECTION 1.3: MANUFACTURER

Blastpro Manufacturing  
6021 Melrose Lane  
Oklahoma City, OK 73127  
Toll free: 877-495-6464  
Phone: 405-491-6464  
Fax: 405-495-4994  
Website: [www.BlastProMfg.com](http://www.BlastProMfg.com)



**SECTION 2.1: GENERAL**

**SECTION 2.2: MAINTENANCE AND WEAR PARTS REPLACEMENT MODES**

**SECTION 2.3: WORK SITE ASSESSMENT AND INSPECTION**

**SECTION 2.4: PERSONAL PROTECTIVE EQUIPMENT**

**SECTION 2.5: OPERATIONAL SAFETY**



## **SECTION 2.1: GENERAL**

Read and understand this Machine Manual prior to operating or performing maintenance on the BRB-2800.

This Machine Manual has been developed as a guideline for machine operation. It is not a substitute for proper organizational training and management.

All machine operators and maintenance personnel should be properly trained in operation and safety features of the BRB-2800.

Make these operating instructions accessible to all operating and maintenance personnel.

Never weld, modify, cut or grind components of the BRB-2800 without prior written consent from the manufacturer.

Never use aggressive cleaning chemicals to clean the machine.

All operators and maintenance personnel should receive training on the dangers of carbon monoxide, or CO. All personnel should be able to identify signs and symptoms of CO poisoning. Common signs associated with overexposure include headache, nausea, weakness, dizziness, lethargy, visual disturbances, and changes in personality and/or loss of consciousness.

## **SECTION 2.2: MAINTENANCE AND WEAR PART REPLACEMENT MODES**

Maintenance mode is defined as placing the machine in a configuration, which minimizes potential electric, hydraulic or stored energy hazards.

In general, the machine should be placed in Maintenance Mode prior to performing any maintenance and/or troubleshooting activities.

### **MAINTENANCE MODE:**

1. Move the machine to a level surface.
2. Reduce machine RPM to low idle.
3. Turn key switch to "OFF" position.
4. Remove key from switch to prevent accidental or unintended starting.
5. Block wheels to prevent the machine from moving.
6. Turn the LP bottle valve to "CLOSED" position.
7. Allow engine and exhaust tube to cool down prior to carrying out any maintenance work.



In general, the machine should be placed in Wear Parts Replacement Mode prior to changing the blade(s).

**WEAR PARTS REPLACEMENT MODE:**

1. Move the machine to a level surface.
2. Raise the blade holder so the blade is off of the ground.
3. Reduce machine RPM to low idle.
4. Turn key switch to "OFF" position.
5. Remove key from switch to prevent accidental or unintended starting.
6. Loosen appropriate bolts and replace blade(s).

After performing any maintenance or repair work verify that all safety labels, guards, lids and bolted connections are properly and securely installed on the machine.

**SECTION 2.3: WORK SITE ASSESSMENT AND INSPECTION**

Before starting scrapping operations, a site assessment must be performed. During the site assessment verify the following:

- Work area is flat, clean, and dry, free of debris, frost-free, and has no flammable liquids nearby. Also, make sure that the machine will be able to clear all obstructions. **NEVER SCRAPE OVER BOLTS, NUTS, SCREWS, NAILS, OR OTHER DEBRIS AS THIS MAY RESULT IN SIGNIFICANT DAMAGE TO THE MACHINE AND SERIOUS INJURY TO THE OPERATOR.**
- Work area is well ventilated. **IF WORK AREA IS ENCLOSED OR PARTIALLY ENCLOSED (WAREHOUSE, PARKING GARAGE, TUNNELS, ETC.),** this is because carbon monoxide, which is a byproduct all internal combustion engines, can be extremely hazardous when allowed to accumulate in an area. An odorless, tasteless, and non-irritating gas, carbon monoxide can quickly become lethal. As a result, liquid propane must be used in all instances when the work area is enclosed or partially enclosed
- Each worker has a carbon monoxide monitor on their persons. These carbon monoxide monitors should be calibrated, in working order, and should be equipped with audible alarms that will warn workers if carbon monoxide levels become too high. **IF CARBON MONOXIDE LEVELS EXCEED 35 PARTS PER MILLION, ALL WORK MUST CEASE IMMEDIATELY! THIS REPRESENTS A POTENTIALLY DEADLY SITUATION WHICH NECESSITATES AN IMMEDIATE SHUTDOWN!**
- All workers have received training on the dangers of overexposure to carbon monoxide. Staff members must also be able to identify all of the



signs and the symptoms associated with carbon monoxide poisoning. This training should ensure that work would stop immediately and emergency medical personnel would be notified promptly if one or more workers exhibited or complained of any of the common signs and symptoms associated with carbon monoxide overexposure, including: headache, nausea, weakness, dizziness, lethargy, visual disturbances, changes in personality, and/or loss of consciousness.

- All operators and other personnel within the work area have received training on proper ventilation procedures and on proper operation procedures for the engine and for other types of equipment.
- **FLOORS HAVE BEEN THOROUGHLY INSPECTED. SOME FLOOR OR DECK SURFACES MAY BE COATED WITH OR CONTAMINATED BY DANGEROUS MATERIALS SUCH AS:**
  - **PCBs**
  - **LEAD**
  - **ASBESTOS**
  - **PESTICIDES**
  - **SOLVENTS**
  - **CLEANING FLUIDS**
  - **AND/OR OTHER HARMFUL CHEMICALS**

**DISTURBING SUCH SURFACES CAN CREATE A SERIOUS HEALTH THREAT TO THOSE WHO INHALE OR COME INTO CONTACT WITH THE DUST. THE WORK AREA MUST BE CHECKED FOR THESE MATERIALS BEFORE WORK CAN BEGIN. BLASTPRO MANUFACTURING, INC. DOES NOT WARRANT ITS EQUIPMENT TO BE SUITABLE FOR, OR APPROVED FOR, REMOVING DANGEROUS MATERIALS. IT IS THEREFORE THE RESPONSIBILITY OF THE CONTRACTOR TO CONFIRM THE SAFETY OF THE WORK AREA AND THE EQUIPMENT WITH THE PROPER AUTHORITIES. IT IS ALSO THE RESPONSIBILITY OF THE CONTRACTOR TO WARN ALL STAFF MEMBERS OF ALL THE POTENTIAL SHORT-TERM AND LONG-TERM HEALTH RISKS ASSOCIATED WITH INHALING AND COMING INTO CONTACT WITH DANGEROUS MATERIALS. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL WORKERS FROM BEING EXPOSED TO DANGEROUS MATERIALS.**

- Operator and any other personnel in the work area are wearing safety glasses with side shields, dust masks, ear plugs, hard hats, steel toed work boots, long sleeved shirts, tight fitting clothing, and gloves. It is also imperative for staff to tie back long hair and to remove all jewelry.
- Work area has been blocked off to pedestrians, unprotected personnel, and untrained personnel. In the event pedestrians, unprotected





personnel, or untrained personnel enter the work area, blasting operations are to be stopped immediately.

- Fire extinguishers are nearby. Also, take note of the location and the contact information of fire departments close to the work site.
- Belt guards are in working order and are present on the machine where needed.
- All glass and equipment, including vehicles, are protected from debris. This can be done by loosely hanging a sheet of visqueen or other protective material in front of the glass or equipment in a curtain-like fashion.
- Plug or cover all floor drains to prevent steel shot from falling into the drains.
- The operator must be aware of their surroundings and use common sense. **THE OPERATOR IS NOT TO OPERATE THE EQUIPMENT IF HE IS TIRED, DISTRACTED, OR UNDER THE INFLUENCE OF DRUGS, ALCOHOL, OR MEDICATION THAT DECREASES AWARENESS!**

#### **SECTION 2.4: PERSONAL PROTECTIVE EQUIPMENT (PPE)**

All personnel working with, or in the vicinity of the BRB-2800 should, at a minimum, utilize the following PPE:

- Protective boots or shoes
- Eye protection with side shields
- Hearing protection
- Appropriate respiratory protection
- Protective leather gloves for handling blades

Additionally, all personnel should utilize a carbon monoxide monitor while working indoors. The BRB-2800 utilizes an internal combustion engine, which produces carbon monoxide, or CO. CO can be fatal at high exposure levels. In addition to CO monitoring equipment, the work site should be properly ventilated to minimize exposure potential.

All personnel should observe PPE requirements particular to each job site.



## **SECTION 2.5: OPERATIONAL SAFETY**

- Support personnel must keep a safe distance from the machine while it is in operation. Do not stand in front of, or behind the machine while in operation.
- The blade should only be actuated up and down with the operator properly seated on the machine.
- Do not drive the machine with the scraper blade more than ½" off of the floor.
- Verify that the LP tank is properly seated on the brackets, with the alignment pin properly located in slot or hole on tank.
- The operator must be aware of their surroundings. No personnel should operate or perform maintenance on the machine if they are tired, distracted or under the influence of drugs, alcohol or medication that decreases awareness.
- Verify that all protective guards and covers are properly installed and secured.
- Verify that there is sufficient light for the operator to view the work surface. The machine is equipped with headlights to provide additional lighting.



**SECTION 3.1: START-UP**

**SECTION 3.2: SHUT DOWN**

**SECTION 3.3: BLADE SELECTION**

**SECTION 3.4: TRANSPORT**



### **SECTION 3.1: START-UP**

Only trained, authorized personnel should be allowed to run the BRB-2800. If training is needed, please consult with your Blastpro Manufacturing representative or authorized distributor.

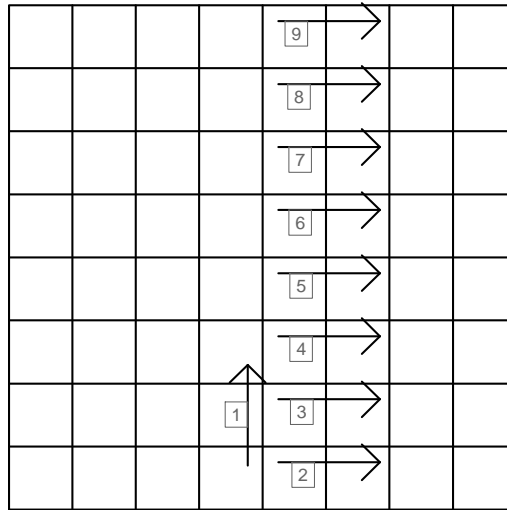
Prior to start-up, the work surface should be inspected for hidden studs, electrical boxes, or any other hidden obstructions. These items should be removed or clearly marked so they can be avoided.

To move machine:

1. Verify that LP bottle is installed and has fuel in it.
2. Verify that the LP bottle valve is turned to the "OPEN" position.
3. Operator should be firmly seated in the operator's seat.
4. Verify that the left and right control levers are in the center position.
5. Turn the key switch to start until the motor starts.
6. Move the throttle knob down to full throttle. A detent will engage at the proper setting.
7. Push rocker switch on the left control lever to raise the blade.
8. Push levers forward to move forward; pull backward to reverse. Varying positions of the left and right control levers will turn the BRB-2800 left and right.
9. Move machine to desired location.

Normal Operation:

1. Verify LP bottle has fuel in it.
2. Verify that the LP bottle valve is open.
3. Insert selected blade into blade holder (see SECTION 3.3: BLADE SELECTION). Always wear leather gloves and use caution when handling the blades.
4. Operator should be firmly seated in the operator's seat
5. Verify that the left and right control levers are in the center position.
6. Turn the key switch to start until the motor starts.
7. Move the throttle knob down to full throttle. A detent will engage at the proper setting.
8. Push rocker switch on left control lever to adjust the blade angle. Some materials may require more pressure on blade for removal. This can be accomplished with a higher angle on the blade holder.
9. Move control levers forward to start removal. It is recommended to make a single pass in one direction to expose an edge of the material to be removed. Subsequent passes should be made perpendicular to the initial pass. See FIGURE 3.1.1.



**FIGURE 3.1.1**

### **SECTION 3.2: SHUT DOWN**

At end of shift or work day:

1. Move machine to level ground for storage.
2. Use the rocker switch in the left control lever to lower the cylinders until the front caster lifts off of the ground.
3. Pull throttle up to low idle.
4. Turn key switch to "OFF" position.
5. Remove key to protect against unauthorized operation.
6. Turn the LP bottle valve to "CLOSED" position.

For long term storage:

1. Move machine to level ground in a secure location for storage.
2. Lift blade to upper-most position.
3. Pull throttle up to low idle.
4. Turn key switch to off position.
5. Remove the blade and/or the blade holder from the front of the machine.
6. Turn key switch to start position until the motor starts.
7. Use the rocker switch on the left control lever to lower the cylinders until the front caster lifts off of the ground.
8. Turn key switch to off position.
9. Remove the key to protect against unauthorized operation.
10. Turn the LP bottle valve to "CLOSED" position.
11. Remove LP bottle and store in a secure location.
12. Cover the BRB-2800 to protect it from dust and moisture.



### SECTION 3.3: BLADE SELECTION

Selecting the proper blade for the application will have a dramatic effect on machine efficiency. If a blade is too wide for the application, there may not be enough pressure on the blade to stay under the material to be removed. If the blade is too narrow, the machine may not be removing the maximum material it is capable of in a single pass.

Based on information about a particular job, start with the widest blade that may be appropriate for removal. Make a test pass to determine if the blade will stay under the material. If so, continue with this selected blade. If removal of the material is relatively easy, consider moving to a larger blade. If it is difficult to stay under the material, move to a narrower blade.

Always wear leather gloves and use caution when handling blades.

In general, flat blades should be used for scraping glues, mastics, epoxies and thinsets. SEE FIGURE 3.3.1.



**FIGURE 3.3.1**

For carpet, rubberized and elastomeric coatings, a carpet blade should be utilized. The 90° wings on each end of the blade will help keep the removed material manageable. SEE FIGURE 3.3.2.



**FIGURE 3.3.2**



Blastpro offers a carbide tipped tool for tile removal. This can be inserted into the 3-hole tool adapter on the blade holder. SEE FIGURE 3.3.3



**FIGURE 3.3.3**

#### **SECTION 3.4: TRANSPORT**

Only use factory installed tie-down/lifting lugs when transporting or moving the equipment. These are located at the front of the machine, near the blade, and at the rear of the machine, under the motor mounting plate.

Never secure the machine with straps or chains across the hydraulic cylinders. This can result in damage to the cylinders or premature wear.

Verify that lifting straps or chains are rated for the weight of the machine.

Verify that trailer or truck bed is rated for the weight of the machine.

Remove scraper blade and/or pivoting blade holder prior to securing for transport.

Verify that the blade holder is lowered and that the front swivel caster is off of the truck or trailer bed.

Never allow personnel to stand under the machine when it is being lifted.

Verify that LP bottle valve is in "CLOSED" position and that the bottle is securely stored during transport.



**SECTION 4.1: MAINTENANCE INTERVALS**

**SECTION 4.2: TROUBLESHOOTING**

**SECTION 4.3: RECOMMENDED SPARE PARTS**

**SECTION 4.4: RECOMMENDED TOOLS**

**SECTION 4.5: HYDRAULIC SCHEMATIC**

**SECTION 4.6: ELECTRIC SCHEMATIC**

**SECTION 4.7: PARTS LIST**

**SECTION 4.8: ENGINE OWNER'S AND SERVICE MANUALS**





## **SECTION 4.1: MAINTENANCE INTERVALS**

### **Daily, or at the beginning of each shift**

Never inspect a pressurized hydraulic system with your hand. Pinhole leaks can inject hydraulic fluid into the body, which can result in serious injury. If additional assistance is required consult your Blastpro representative, authorized Blastpro distributor, or qualified hydraulic systems professional.

Always wear leather gloves and use caution when handling blades.

1. Check engine oil.
2. Check hydraulic oil level.
3. Inspect hydraulic oil cooler for obstructions (dirt, paper, etc.).
4. Inspect hydraulic components and hoses for leaks or abrasions.
5. Inspect engine air filter\*.
6. Inspect belts for proper tension.
7. Inspect blades for excessive wear.
8. Check air intake and cooling areas\*.
9. Inspect drive wheels for wear.

### **Every 25 Hours**

1. Service engine pre-cleaner element\*.
2. Grease all blade and cylinder pivot pins.

### **Every 50 Hours**

1. Change hydraulic oil filter.
2. Top off hydraulic oil tank.
3. Tighten rear wheel nuts
4. Grease front caster and inspect for wear or damage.
5. Blow out hydraulic oil cooler fins.

### **Every 100 Hours**

1. Replace engine air cleaner element\*.
2. Change engine oil\*.
3. Replace engine oil filter\*.

\*Perform these maintenance activities more frequently under extremely dusty, dirty conditions.



**SECTION 4.2: TROUBLESHOOTING**

PROBLEM	POSSIBLE CAUSE	REMEDY
Engine will not start	LP tank is empty LP tank valve is closed  Battery is dead  Cold conditions  Incorrect oil level  Dirty air cleaner Faulty spark plug	Replace with a full tank Turn LP valve to "OPEN" position  Jump start machine or replace battery  Work throttle back and forth while turning key switch to "START"  Check oil level and fill/remove as necessary Clean/replace air cleaner Replace/re-gap spark plug
Engine seems sluggish during operation	Throttle not set in high position Incorrect oil level  Dirty air cleaner	Move throttle to high position  Check oil level and fill/remove as necessary Clean/replace air cleaner
Slow coating removal	Blade is dull Blade is too wide  Incorrect blade angle	Flip or replace blade Replace with narrower blade  Adjust blade angle up or down with hydraulic cylinders
Cylinder movement seems slow	Dirt in cylinder control spool valve  Damaged cylinder	Consult Blastpro representative or authorized distributor
Ground speed seems slow	Throttle not set in high position Damage to ground drive pump or motor	Move throttle to high position  Consult Blastpro representative or authorized distributor



### SECTION 4.3: RECOMMENDED SPARE PARTS

It is recommended that the machine owner/operator keep a minimum of spare parts with the machine while it is working. Down time due to part failure or lack of wear parts can far exceed the cost of the parts.

PART NUMBER	DESCRIPTION	QUANTITY
BTP000451	6" CARPET REMOVAL BLADE	Depends on size of job
BTP000553	8" CARPET REMOVAL BLADE	Depends on size of job
BTP000554	10" CARPET REMOVAL BLADE	Depends on size of job
BTP000555	12" CARPET REMOVAL BLADE	Depends on size of job
BTP000853	6" TILE BLADE	Depends on size of job
BTP000854	8" TILE BLADE	Depends on size of job
BTP000855	12" TILE BLADE W/ BEVEL	Depends on size of job
BTP000886	10" TILE BLADE W/ BEVEL	Depends on size of job

### SECTION 4.4: RECOMMENDED TOOLS

"Recommended Tools" is a list of the minimum tools necessary to maintain and/or operate the BRB-2800 during normal operation. This list is not meant to be exhaustive or to indicate the tools required for more intensive maintenance.

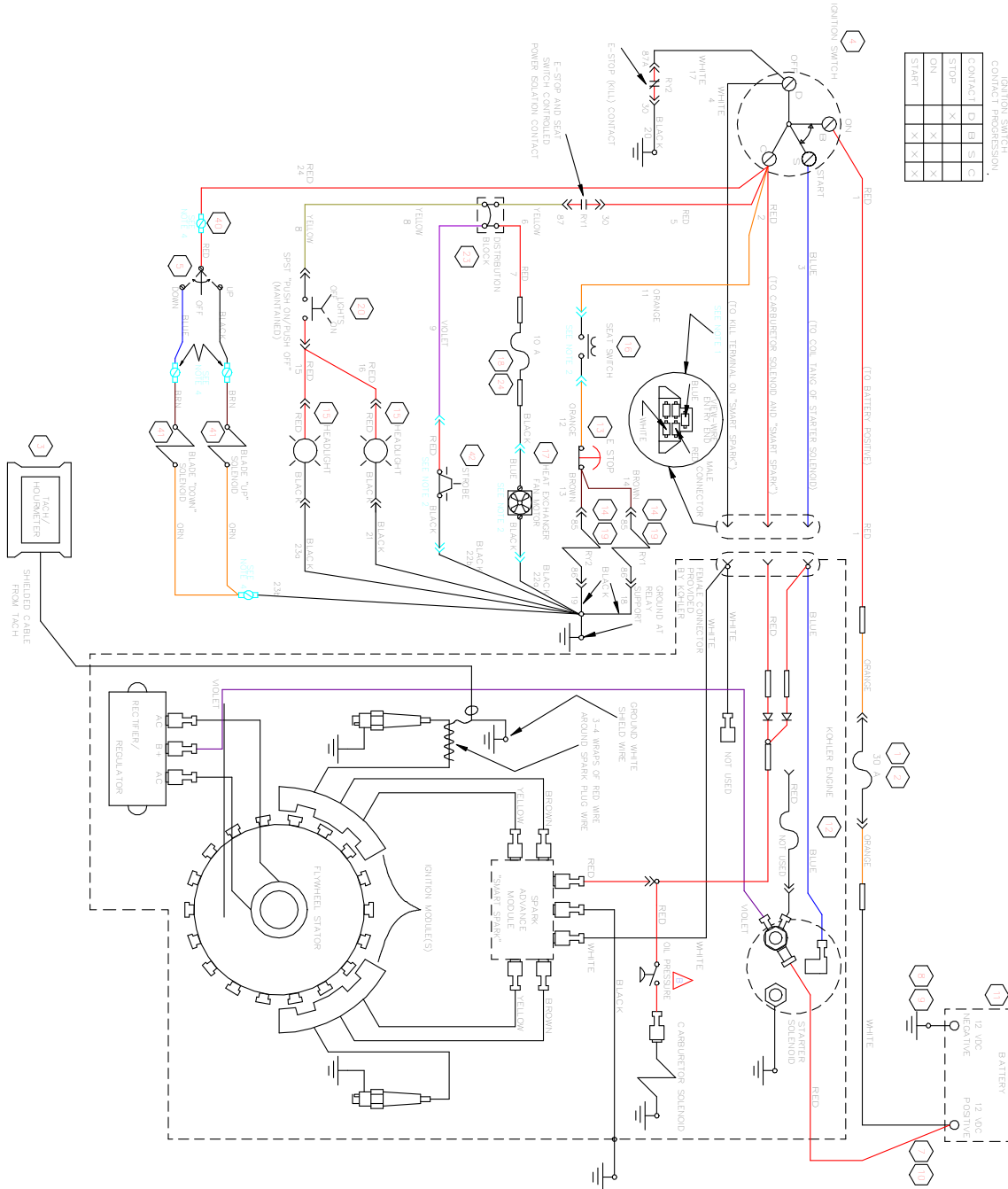
- Ratchet
- Sockets: 7/16", 1/2", 9/16" and 3/4"
- Combination wrench: 7/16", 1/2", 9/16" and 3/4"
- Utility knife
- Rubber mallet or dead blow hammer
- Leather gloves





ITEM	PART NUMBER	QTY	DESCRIPTION
1	BP85000504	1	HYDRAULIC TANK
2	BP85000012	1	JOYSTICK 3-POS SWITCH
3	BP85000011	1	JOYSTICK – STANDARD
4	BP85000007	1	PUMP – HYDRAULIC
5	BP85000003	2	GROUND DRIVE MOTOR
6	SCR0003	2	HYRDAULIC CYLINDER
7		1	PO CHECK VALVE
8	BP85000009	1	VALVE/LIFT CYLINDER
9	BP85000010	1	EQUALING VALVE
10	BP85000001	1	HYDRAULIC COOLER
11	BP85000008	1	FILTER

**SECTION 4.6: ELECTRIC SCHEMATIC**



IGNITION SWITCH CONTACT ASSIGNMENT

CONTACT	D	E	S	C
STOP	X	X	X	X
ON	X	X	X	X
START	X	X	X	X



**SECTION 4.7: PARTS LIST**

PART NUMBER	DESCRIPTION	QTY
BP85000001	HYDRAULIC COOLER	1
BP85000004	3V/3VX-475 BANDED BELT	2
BP85000002	SPLINE COUPLING	1
BP85000003	GROUND DRIVE MOTOR	2
BP85000005	HANDLE	1
BP85000006	BLADE PIVOT PIN BRB-2800	1
BP85000007	PUMP-HYDRAULIC	1
BP85000008	FILTER	1
BP85000009	VALVE LIFT CYL.	1
BP85000010	EQUALING VALVE	1
BP85000011	JOYSTICK STANDARD	1
BP85000012	JOYSTICK 3 POS SWITCH	1
BTP001409-27HP	27HP MOTOR FOR 10-27	1
BT-07100007	TACH/HOUR METER	1
BTP003048	EXHAUST PURIFIER/W 1 1/2 INLET	1
ELECTRICAL-05	12V BATTERY	1
ZT-00020	BATTERY CABLE-POSITIVE	1
ZT-00021	BATTERY CABLE-NEGATIVE	1
BTP001409-13	REGULATOR 25HP/KOEHLER	1
BTP001409-8	VAPORIZER ASSBLY/W FILTER	1
BTP001181	WIRING HARNESS 1018	1
SCR0038	WHEEL/TRACTION DRIVE	2
BTP000257	CASTER/SWIVEL 6.00X3.0 W/1.0 T	1
SCR0003	HYDRAULIC BLADE CYLINDER	2
SCR0042	3/3V5.0-1610 TL DODGE	2
ZT-00024	12V LED WORK LIGHTS	2
SCR0031	PROPANE BOTTLE BRACKETS	1
SCR0044	NON SKID TAPE	2
ZT-00056	1610 X 1 1/2 KW TAPERLOCK BUSH	3
SCR0016	UPPER CYLINDER PIN	2
SCR0015	LOWER CYLINDER PIN	2
BT03400013	E CLIP/FOR 1.0" OD SHAFT .822	12
BT06150031	3/3V 4.75 SHEAVE	1
ZT-00058	NEEDLE BEARING	1
ZT-00059	HM IDLER BRACKET	1
ZT-00060	SO2 SHAFT	1
BP85000015	BRB2800 STEEL KIT	1
BP85000017	MUFFLER TIP 30 DEG.	1
BP85000016	MUFFLER TIP 90 DEG.	2
BTP002439	WIRING HARNESS	1



**SECTION 4.8: ENGINE OWNER'S AND SERVICE MANUALS**