

TRAC VAC

Model 288



Operating and Assembly Manual

**Midwest Equipment Manufacturing
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Introduction

Prior to operating your 288 Leaf Trailer, you should be trained in its proper use and warned of its dangers before operating, adjusting, or servicing it. You should also read and understand this entire manual as well as the appropriate engine manual.

- **Familiarize yourself with the controls and know how to stop operation quickly.**
- **Inspect your work area carefully. Remove any foreign debris from work area that could cause bodily harm or equipment failure.**
- **Avoid contact with all moving parts. Remain a safe distance from the intake nozzle while in operation.**
- **Make sure gate is completely down and in the locked position during vacuum operation.**
- **Never tamper with safety devices or guards. If a guard or safety device is damaged, or removed, replace before operation.**
- **Handle gasoline carefully. Never add fuel to tank while the engine is running or hot.**

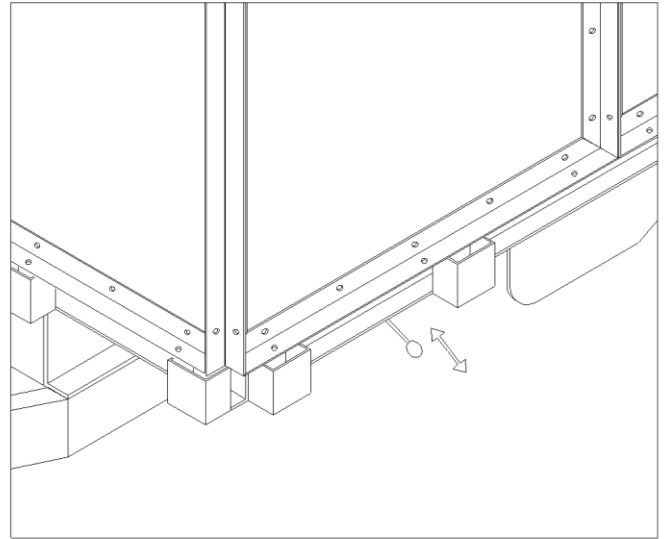
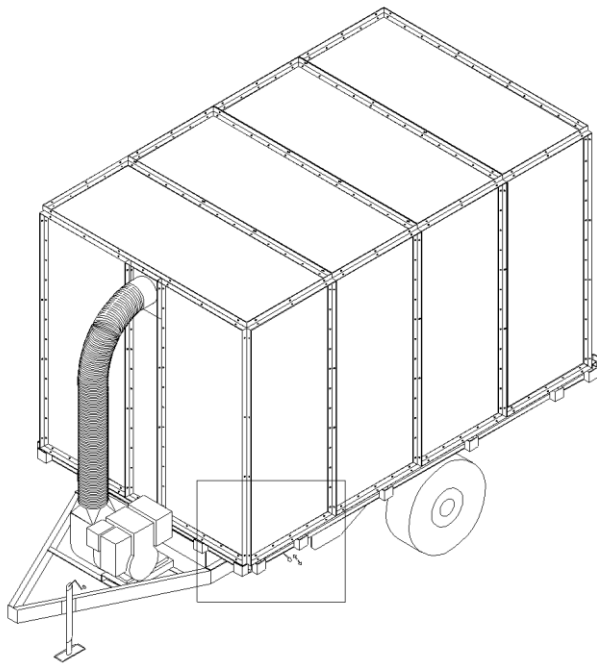
Vacuum Operation

- **It is important that you read and understand this entire manual and the appropriate engine manual before operating your 288 Leaf Trailer.**
- **Make sure that the work area is free from any large heavy objects that could cause machine failure or personal injury.**
- **Make sure that the gate is closed and in the locked position before operation of the vacuum.**
- **Locate the STARTING ENGINE instructions of the engine manual that accompanies this manual.**
- **Follow the instructions for starting the engine and set the throttle to desired operation speed making sure not to exceed the manufacturer's maximum rated speed of 3800 RPM.**

- **Remove intake hose from hose support arms, and using the handle, guide the intake hose over material to be removed from the work area.**
- **When work area is clean and clear of debris, replace intake hose in support arms and stop engine operation using the STOP ENGINE instructions from the engine manual that accompanies this manual.**
- **Intermittently check load capacity by looking through the clear Plexiglas panel located in the front of the trailer.**
- **When you have reached maximum load capacity, discontinue operation and proceed to dump site. Follow instructions provided to remove the refuse from the container.**
- **Your 288 Leaf Trailer is equipped with a rock trap, an 8" diameter drop in the inlet to allow heavier objects that may have been missed in the inspection of the work area to drop into instead of traveling into the housing and possibly damaging it.**
- **Always stop operation and shut off engine before inspecting or cleaning rock trap assembly.**
- **To inspect the rock trap a small door is in the top of the inlet directly over the rock trap to allow you to visually inspect the rock trap for any debris to be removed.**
- **To remove debris from the rock trap, a small over center clip on the rock trap itself will release the rock trap assembly for dumping of debris. To reinstall slip rock trap back onto bottom of inlet and re-clip into place.**

Dump Cycle Operation

- **Before operating the dump cycle, make sure that the towing vehicle is not in way of any traffic and parked safely, also make sure that the 288 Leaf Trailer's engine is off.**
- **Before using your 288 Leaf Trailer you should familiarize yourself with its operations. We suggest that you operate the dump cycle a few times in an open area like an empty parking lot. Note: notice the amount of clearance needed for gate to swing completely open and for the bed to raise to its maximum dump height.**



- **Locate the dump cycle control toward the front, on the left of the trailer, the illustration above will help you with its location.**
- **Remain a safe distance from the bed as it raises and lowers while operating the dump cycle**
- **To raise the bed for dumping, push the hydraulic control lever in until the hydraulic pump begins to lift the gate. When the gate is completely open, the bed frame will begin to raise. Be sure to remain a safe distance from under the bed frame as it raises.**
- **DO NOT leave hydraulic control unattended to clean out the bed until you place the safety arm in its engaged upright position. Note: Safety arm is located above hydraulic control.**
- **Always engage the safety arm if you are performing any maintenance with bed frame in the dump position.**
- **To lower bed after dumping, make sure to remove safety arm from its upright position and remain from underneath the bed as you operate the hydraulic control lever.**
- **Remaining a safe distance from under the bed frame, pull the hydraulic control lever out until the hydraulic pump activates the cylinders to lower the bed frame.**
- **You can control the speed that the bed lowers or raises by moving the hydraulic control lever either in or out from its max/min positions.**

- To insure that the locking mechanism does in fact operate properly, slow the gate coming down before it comes in contact with the trailer walls and allow the guide brackets and gate lock brackets to engage. When the gate lock brackets have been located properly to the gate lock assembly, you may return to maximum speed.
- Allow the gate to continue down until the hydraulic pump forces it into the locked position. You will notice a change in the sound of the hydraulic pump when this occurs.

Maintenance

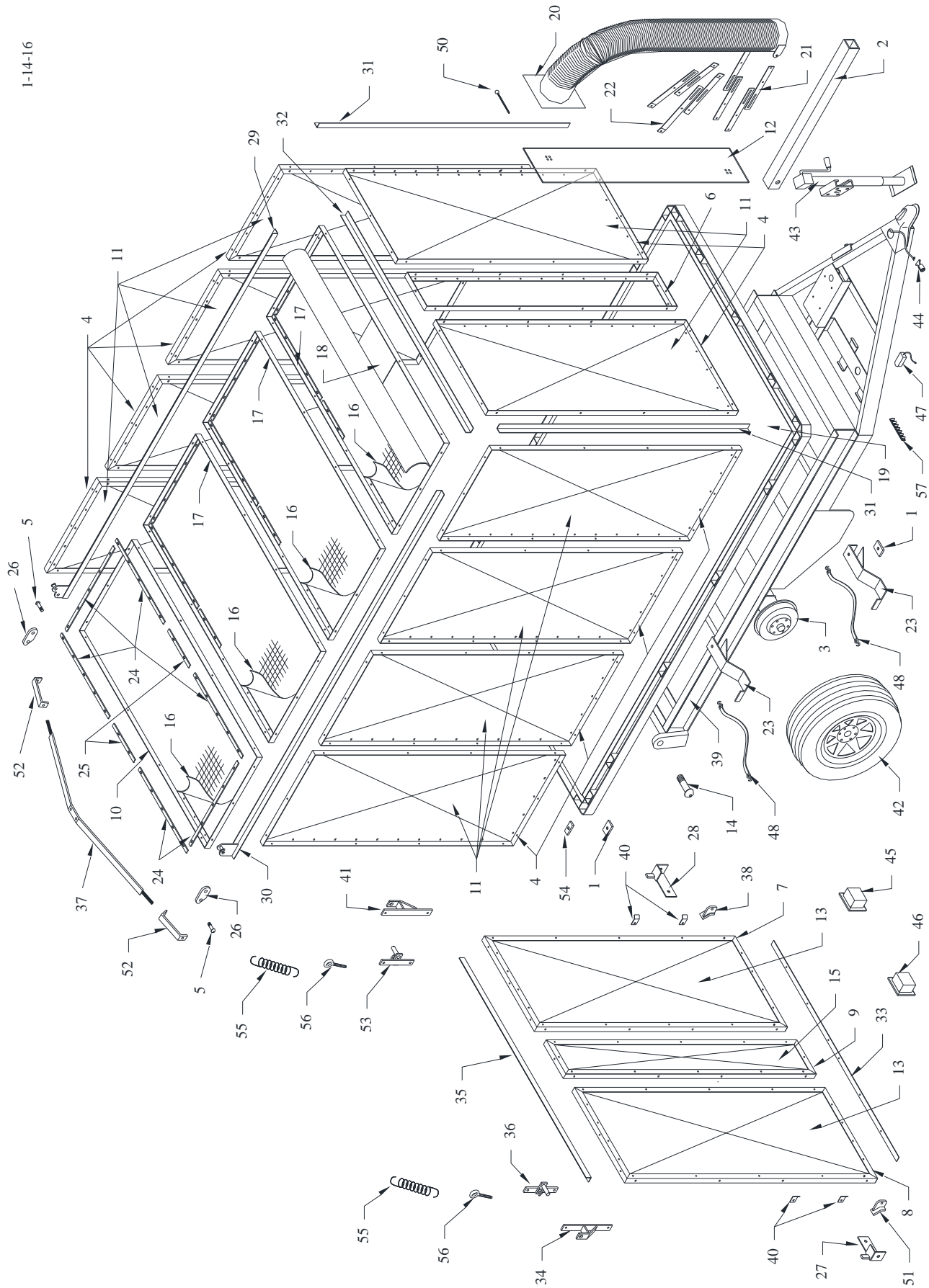
- Empty rock trap after each use.
- Periodically check engine oil as described in the ENGINE OPERATION section of this manual.
- Periodically check hydraulic fluid level.
- Grease the exhaust end of the blower housing assembly periodically to allow the metal exhaust hose to connect properly to the blower housing.
- Remember to service engine as described in the ENGINE OPERATIONS section of this manual.
- Periodically check the tire pressure to minimize trailer rocking and fishtailing.
- Periodically check trailer tongue jack for proper operation.
- Check trailer lights for proper operation.
- Check and lubricate bed frame hinge brackets with grease gun at zerk fittings.
- Check and lubricate bed frame hydraulic cylinder pins with grease gun at zerk fittings
- Make sure to keep battery adequately charged for maximum operation and to insure longer life.
- Periodically check and tighten all bolts.
- Check hydraulic lines and connections for wear and leakage.

Helpful Hints

- **When towing trailer, follow all traffic and speed regulations to insure your safety.**
- **When vacuuming your work area, pay close attention to the material you are picking up, and keep away from large, heavy objects that can cause damage to the equipment or even yourself.**
- **When emptying trailer, make sure you have plenty of clearance above and behind trailer for proper operation.**
- **When raising or lowering the bed frame try to keep trailer as level as possible to insure that the trailer weight remains above the axle and wheels and also to allow gate to come down and lock properly.**
- **If problems occur in lowering and locking gate, move trailer to a flat level area and allow gate to raise and lower again. This should allow gate to lower and lock automatically.**
- **Periodically grease mating parts of blower housing and metal exhaust hose to insure proper connection.**

Trac-Vac Model 288- General Parts

1-14-16

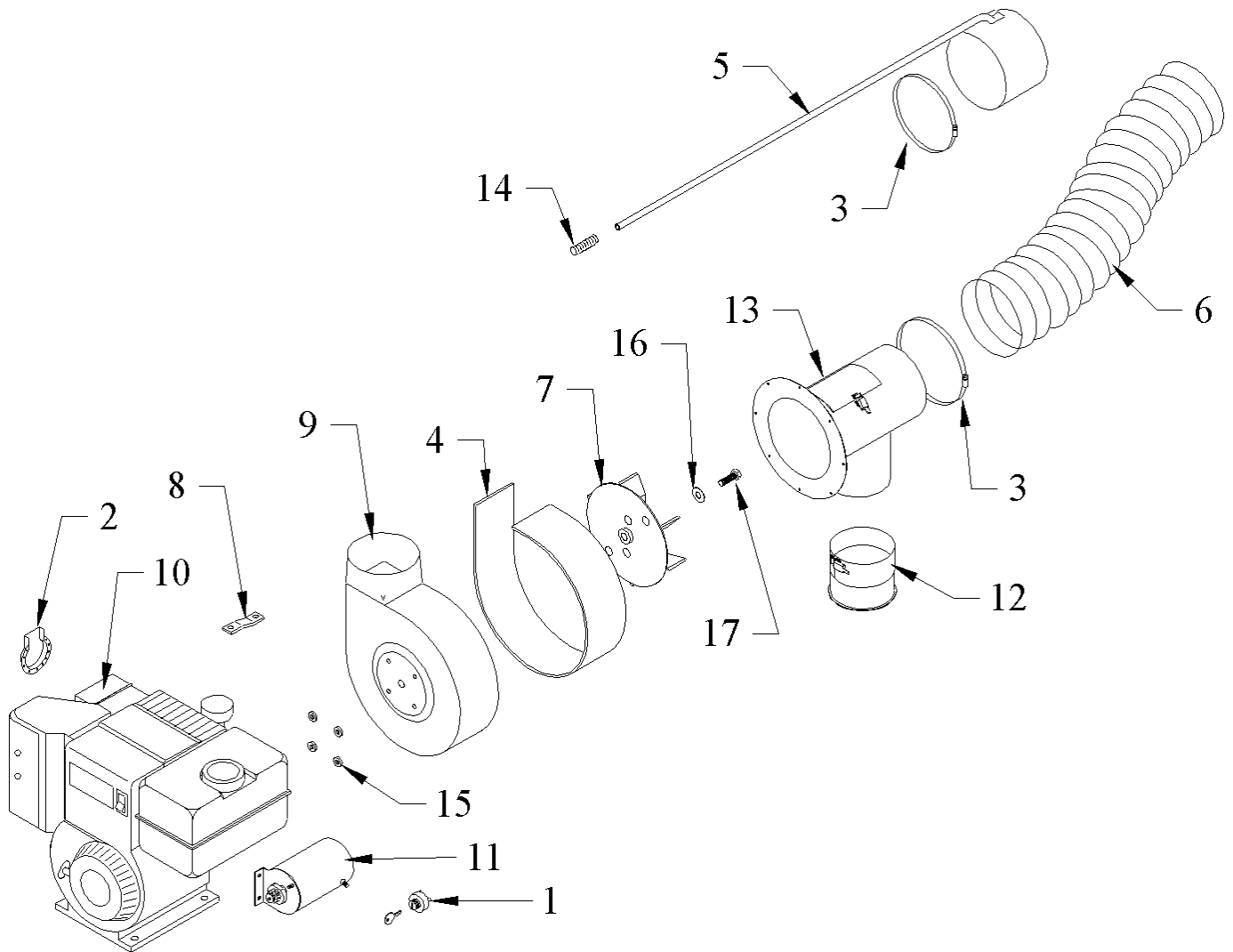


Model 288 Parts List

(Common Parts between both 288- 288-16, 288-23 & 28823-12)
(Less Electrical and Hydraulic Parts)

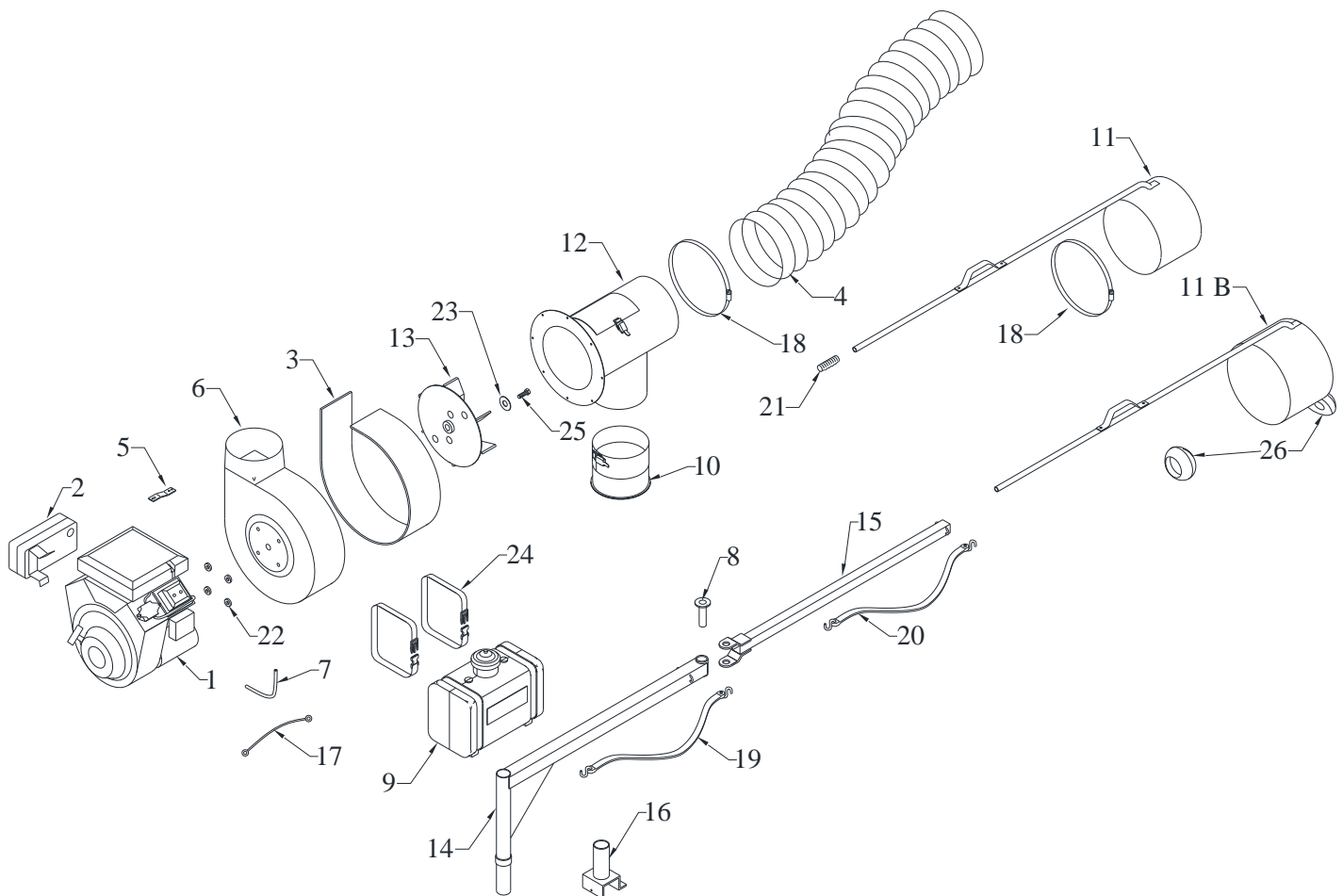
<u>Key</u>	<u>Part. No.</u>	<u>Description</u>	<u>Key</u>	<u>Part. No.</u>	<u>Description</u>
1	28805	Frame Mount Brkt.	43	28876	Trailer Jack
2	28808	Safety Arm, 28872		28886	Jack Snap Ring
3	28809	Axle Assembly	44	28907	6-Way Male Plug
4	28810	Panel Frame	45	28878	Tail Light, LH
5	28811	1/2"-1 1/4" Shoulder Bolt	46	28879	Tail Light, RH
6	28813	Front Center Panel Frame	47	28881	Breakaway Switch
7	28814	Gate Panel Frame, LH	48	28885	15" Tie Down w/hooks
8	28815	Gate Panel Frame, RH	50	28887	Hyd Control Arm w/knob
9	28816	Gate Center Panel Frame	51	28892	Gate Lock Brkt, RH
10	28817	Top Back Panel Frame	52	28893	Angle Support Brkt.
11	28820	Side Panel	53	28894	Dump Gate Hyd. Mnt. LH
12	28823	Clear Tuffak	54	28895	Frame Mount Strap
13	28824	Dump Gate Panel	55	48038	Spring
14	28825	1"x 2" Shoulder Bolt	56	48043	Eyebolt
15	28826	Dump Gate Center Panel	57	28835	Terminal Block, 6 place
16	28827	Screen Panel Top		28804	Decal, Trac: 11" x 20",
17	28828	Top Panel Frame			Vac: 11" x 19" (set of 2)
18	28829	Screen Shield		45131	Decal, Trac-Vac, 2" x 8"
19	28830	Bed Frame		45133	Decal, Warning Stop Eng.
20	28832	8" Exhaust Hose			
21	28834	Exhaust Hose Supp. Arm			
22	28836	Exhaust Hose Support			
	28922	Exhaust Hose Support			
		288-12-23 only			
23	28851	Intake Hose Support			
24	28852	Screen Clamp, 27 3/8"			
25	28853	Screen Clamp, 12"			
26	28854	Gate Hinge			
27	28855	Gate Lock, RH			
28	28856	Gate Lock, LH			
29	28860	Panel Frame Mnt. Rail LH			
30	28861	Panel Frame Mnt. Rail RH			
31	28862	Panel Frm. Mnt. Rail Corner			
32	28863	Panel Frm. Mnt. Rail Top			
33	28864	Dump Gate Bottom Supp.			
34	28866	Hydraulic Mount, RH			
35	28867	Panel Frame Mount Rail			
36	28868	Dump Gate Hyd. Mnt., RH			
37	28869	Support Bracket			
38	28871	Gate Lock Bracket, LH			
39	28872	Main Frame, 288			
40	28873	Gate Guide			
41	28874	Hydraulic Mount, LH			
42	28875	Tire & Wheel Ass'y			

Trac-Vac Model 288- Specific Parts



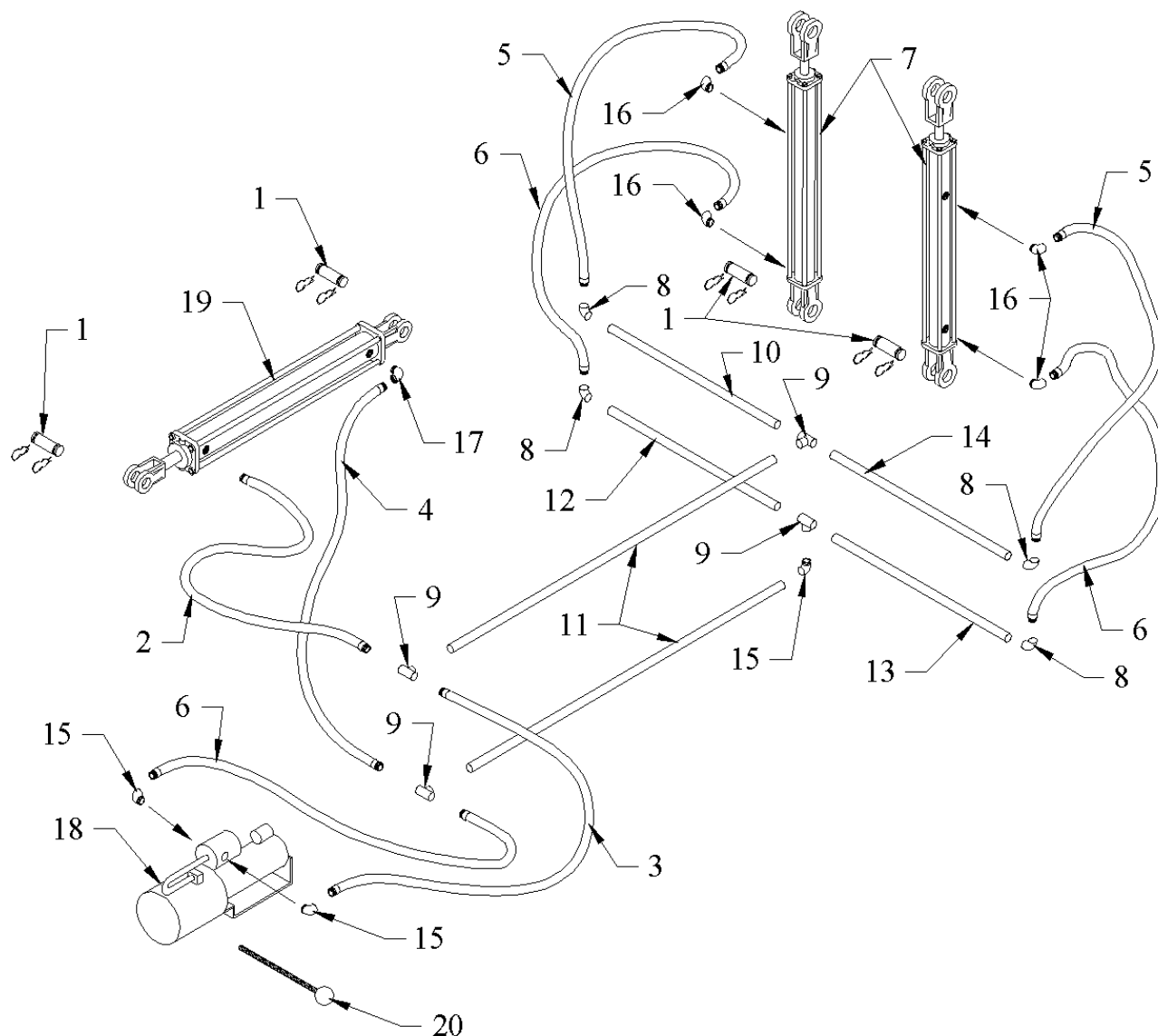
<u>Key</u>	<u>Part No.</u>	<u>Description</u>	<u>Key</u>	<u>Part No.</u>	<u>Description</u>
1	18110	Key Switch	10	18129	Engine, 10HP Briggs Intek
2	18115	11HP Muffler Deflector	11	20121	Starter Assembly
3	18119	8" Hose Clamp	12	28833	Rock Trap Assembly
4	20021	Liner, Turbine Housing	13	28840	8" Inlet
5	20038	Intake Nozzle, 8"	14	45107	Handle Grip
6	20040	Hose, 8" x 12 1/2'	15	86027	Spacer, Turbine Housing
7	20050	Turbine	16	86107	Washer, Turbine
8	20051	Turbine Support Bracket	17	3760110	3/8"-24 x 1 1/4" HHC
9	20060	Turbine Housing			

Trac-Vac Model 288-16/288-23/288-23-12 Specific Parts



Key	Part No.	Description	Key	Part No.	Description
1	18140	Engine, 16HP Briggs	13	28842	Turbine, Heavy Duty 14"
	20123	Engine, 23 HP Briggs		IV16330	Turbine, HD, 18"
2	18141	Muffler, 16HP	14	28858	Hose Support Arm
	20124	Muffler, 23HP	15	28859	Support Arm Extension
3	20021	Liner, Turbine Housing	16	28870	Support Arm Mount
4	20041	Intake Hose, 10" x 10'	17	28803	Battery Cable to Solenoid
	20043	Intake Hose, 12" x 10'	18	28884	10" Hose Clamp
5	20052	Turbine Support Brkt.		56102	6" Hose Clamp (X4)
6	20060	Turbine Housing	19	28888	31" Tie Down w/hooks
	20061	Turbine Housing, 18"	20	28890	21" Tie Down w/hooks
7	28901	Fuel Line, 288	21	45107	Handle Grip
8	28801	1" x 4" Clevis Pin	22	86027	Spacer Turbine Housing
9	72710	Gas Tank, 5 Gallon	23	86107	Washer, Turbine
10	28833	Rock Trap Ass'y		IV16208	Washer Turbine, (12")
11	28838	10" Intake Nozzle	24	16233	Gas Tank Mount Strap
11B	28918	12" Intake Nozzle	25	3760110	3/8"-24 x 1 1/4" HHC
12	28841	10" Inlet	26	10563	Caster Wheel
	28919	12" Inlet			

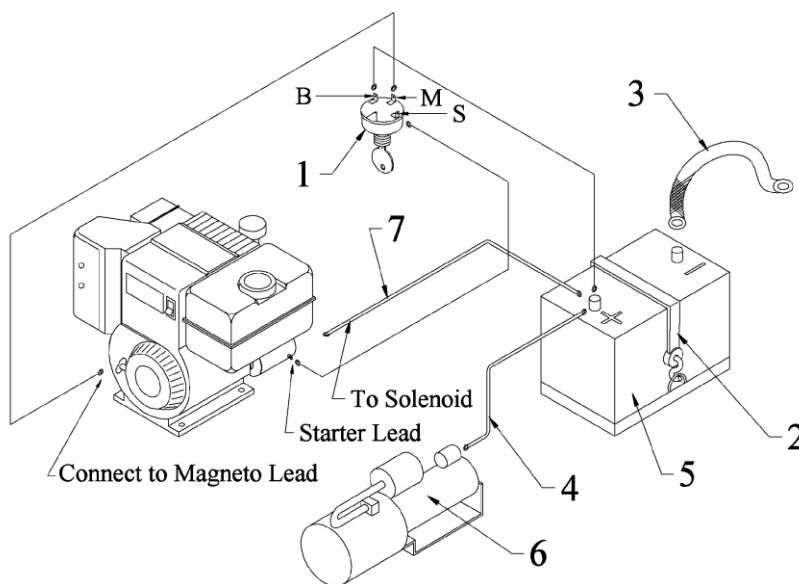
Trac-Vac Model 288-, 288-16, 288-23, 288-23-12 Hydraulic Parts List



<u>Key</u>	<u>Part No.</u>	<u>Description</u>	<u>Key</u>	<u>Part No.</u>	<u>Description</u>
1	28812	Pin, 1" x 3 3/8"	11	288741D	1/4" Pipe x 67"
2	28845	Flex Hose, 40"	12	288741E	1/4" Pipe x 38"
3	28846	Flex Hose, 38"	13	288741F	1/4" Pipe x 33"
4	28847	Flex Hose, 30"	14	288741G	1/4" Pipe x 31"
5	28848	Flex Hose, 74"	15	288741H	1/4 x 90° Street Elbow
6	28849	Flex Hose, 55"	16	288741J	3/8 x 90° Street Elbow
7	28857	Gate Lift Cylinder	17	288741K	1/2 x 90° Street Elbow
8	288741A	1/4 x 90° Elbow	18	28880	Hydraulic Pump
9	288741B	1/4 x 90° Tee	19	28883	Bed Lift Cylinder
10	288741C	1/4" Pipe x 40"	20	28887	Hyd. Control w/ Knob

Trac-Vac Model 288-, 288-16 Electric Wiring Diagrams

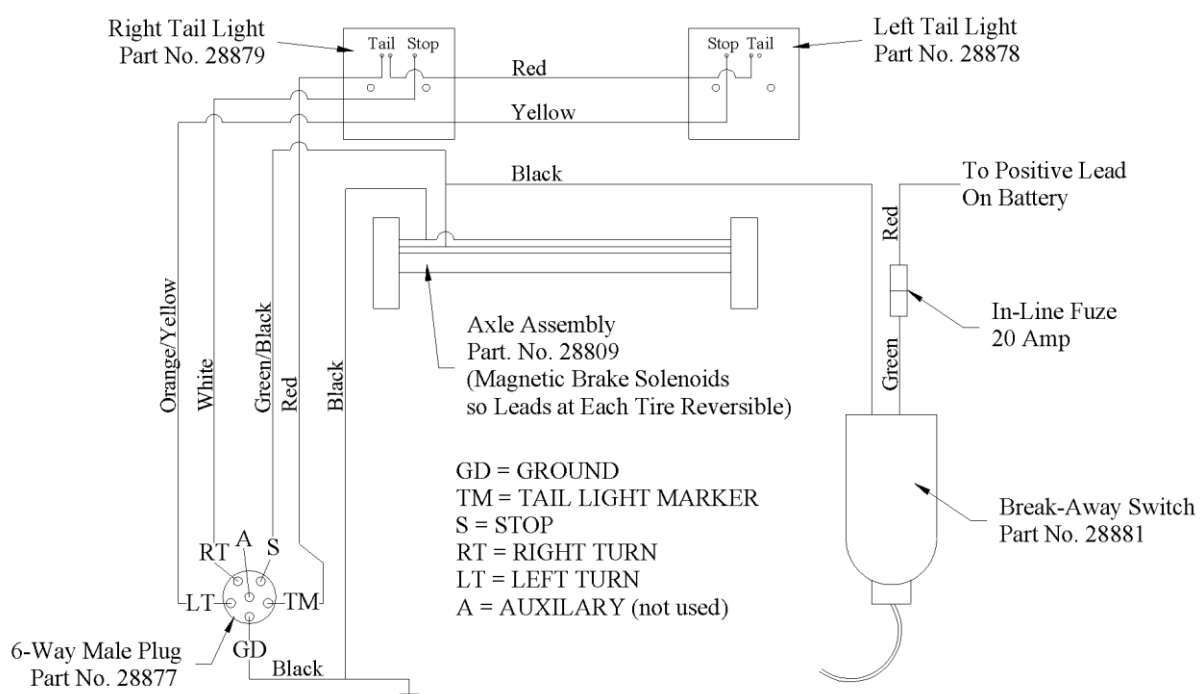
Starter, Pump Wiring Schematic



<u>Key</u>	<u>Part No.</u>	<u>Description</u>	<u>Key</u>	<u>Part No.</u>	<u>Description</u>
1	*18110	Key Switch	4	28891	Battery Cable, 24"
2	18117	Battery Strap	5	28806	Battery
3	28802	Ground Strap	6	28880	12 Volt Hydraulic Pump
			7	28803	Battery Cable, 48"

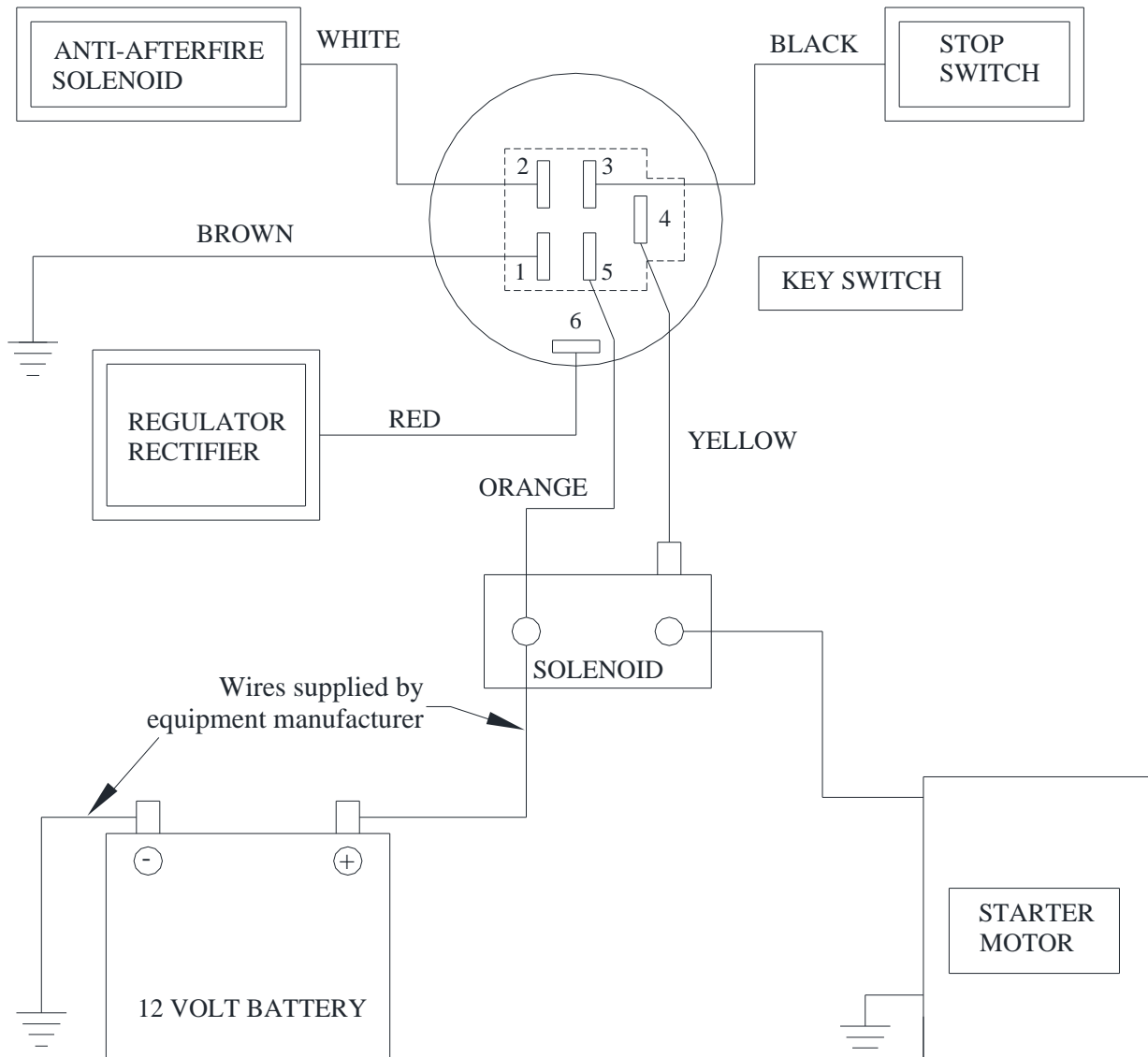
*Key Switch is separate only on 11HP version, 16HP engine has switch and switch wiring built in.

Brake Wiring Schematic

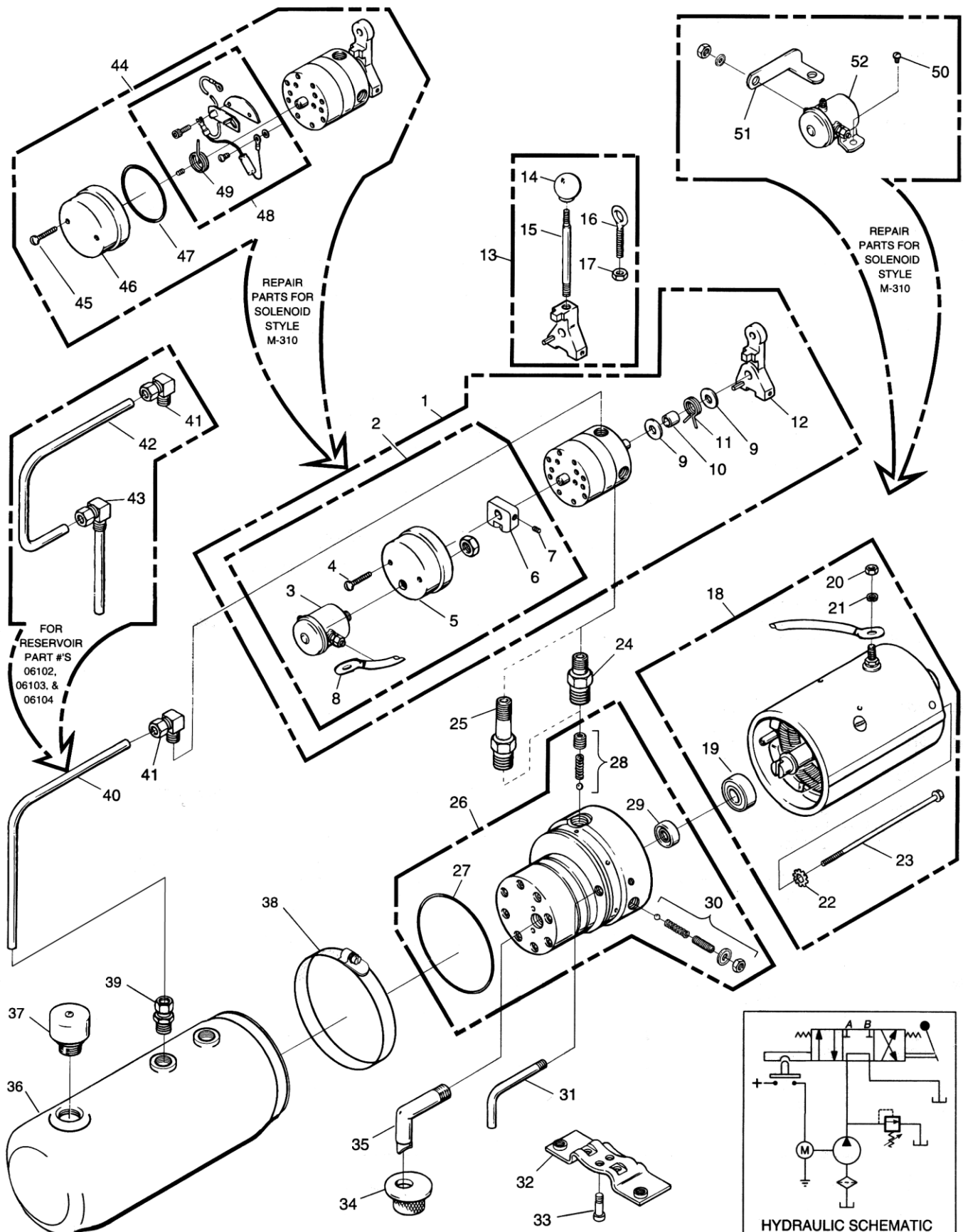


WIRING DIAGRAM FOR STARTER PANEL & KEY SWITCH FOR V-TWIN ENGINES

TERMINAL NO.	WIRE COLOR	FUNCTION
1	Brown	Ground (Switch)
2	White	To Carburetor Solenoid (When used)
3	Black	To Stop Terminal on Engine
4	Yellow	To Solenoid (tab terminal)
5	Orange	To Battery (battery terminal on solenoid)
6	Red	To Regulator/Rectifier



Switch Position	Continuity
1. OFF	1+3+6
2. RUN	2+5+6
3. START	2+4+5



M-310

Ref. No.	Part No.	Description	No. Req.
1	07120	VALVE ASSEMBLY COMPLETE	1
2	04202	• PARTS KIT, Switch Assembly, cam	1
3	04343	• • SWITCH, Start, includes 7/16-20 jamb nut	1
4	07908	• • SCREW, Mach, pan head	2
5	04344	• • COVER, Start Switch	1
6	04342	• • CAM, Start Switch	1
7	07909	• • SCREW, Socket Set, 5/16-18	1
8	04322	• • CABLE	1
9	07780	• WASHER, Flat, (bore 5/16")	2
10	00016	• BUSHING, Torsion Spring	1
11	00018	• SPRING, Torsion	1
12	01077	• HANDLE ASSEMBLY	1
13	00172	• HANDLE ASSEMBLY	1
14	01157	• • BALL, Plastic	1
15	01326	• • ROD, Handle 4"	1
16	01327	• • EYEBOLT, Rod Control, 5/16-18 x 1-7/8"	1
17	07790	• • NUT, 5/16-18 FOR FURTHER BREAKDOWN OF VALVE, SEE VALVE SECTION	1
18	08111	MOTOR, Electric, 12 VDC	1
	08112	MOTOR, Electric, 12 VDC	1
	08120	MOTOR, Electric, 24 VDC	1
19	02318	• BEARING, Base, motor	1
20	07625	• NUT, Hex, 5/16-24	1
21	07781	• WASHER, Lock, 5/16"	1
22	07737	• WASHER, Star, 1/4"	4
23	07738	• SCREW, Hex Head Cap, 1/4-20 x 6-1/2" FOR FURTHER BREAKDOWN OF MOTOR, SEE MOTOR SECTION	2
24	01317	ADAPTER, Pump/Valve, 1-1/2" Long FOR USE WITH RESERVOIR 06105	1
25	01318	ADAPTER, Pump/Valve, 2-1/2" Long FOR USE WITH RESERVOIR 06102, 06103, 06104	1
26	03142	PUMP ASSEMBLY, Gear Code 62	1
	02625	PUMP ASSEMBLY, Gear Code 51	1
	02650	PUMP ASSEMBLY, Gear Code 43	1
	02624	PUMP ASSEMBLY, Gear Code 42	1
	02629	PUMP ASSEMBLY, Gear Code 05	1
	02659	PUMP ASSEMBLY, Gear Code 03	1
27	02352	• O-RING, Industrial (3-5/8" x 3-7/8" x 1/8")	1

Ref. No.	Part No.	Description	No. Req.
28	00075	• PARTS KIT, Check Valve (main)	1
29	02159	• SEAL	1
30	03766	• PARTS KIT, Relief Valve FOR FURTHER BREAKDOWN OF PUMP ASSEMBLY, SEE PUMP SECTION	1
31	01274	TUBE, Return (1/8" NPT)	1
32	04559	BRACKET, Plate Mount 5.00" C to C	1
	04560	BRACKET, Plate Mount 3.25" C to C	1
33	07894	SCREW, Socket Head Cap, Thread forming, torx drive, 5/16-18 x 1-1/8"	2
34	01134	SCREEN, Filter (suction)	1
35	01209	TUBE, Filter Suction 3/8" NPT 90 Deg.	1
36	06102	RESERVOIR, 4-1/2" Dia. x 8", usable	1
	06103	RESERVOIR, 4-1/2" Dia. x 10", usable	1
	06104	RESERVOIR, 4-1/2" Dia. x 12", usable	1
	06105	RESERVOIR, 4-1/2" Dia. x 13", usable	1
37	03866	PLUG, Vent, 3/8" NPT	1
38	07900	CLAMP	1
39	01124	CONNECTOR ASSEMBLY, Brass, 13" Reservoir	1
40	04317	TUBE, Return, 4 1/2", for 13" reservoir	1
41	01225	ELBOW ASSEMBLY, 90 Deg. Brass 3/8" Tube x 1/4" NPT	1
42	01294	TUBE, Return, 4-1/2", for 8", 10" & 12" reservoir	1
43	04313	TUBE ASSEMBLY, 90 Deg. Brass With Return Nipple, for 8", 10" & 12" reservoir	1
44	00874	• VALVE ASSEMBLY, Complete	1
45	07711	• • SCREW, Truss Head Machine 10-24 x 1-1/8"	2
46	00068	• • COVER, Condensor, contact	1
47	02354	• • O-RING, Industrial (2-5/16" x 2-1/2" x 3/32")	1
48	03721	• • PARTS KIT, Electrical	1
49	00188	• • • SPRING, Contact	1
50	07683	SCREW, Round Head Machine 10-32 x 1/4"	2
51	01349	STRAP, Motor-Solenoid Connecting	1
52	03336	SWITCH, Solenoid, 12 VDC 3-post insulated ground	1
	03335	SWITCH, Solenoid, 12 VDC 4-post isolated ground	1
	03343	SWITCH, Solenoid, 24 VDC 3-post insulated ground	1



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Form No. 2263-94

CANADA:
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 Telephone: (519) 686-5900
 Telefax: (519) 686-8976

Litho in U.S.A.
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TRAC-VAC MAINTENANCE LOG

DATE _____

MAINTENANCE PERFORMED

This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There is no handwriting or other markings on the paper.**TRAILER SERIAL#**_____

ENGINE SERIAL# _____

RETAILER PHONE#

TRAC-VAC OWNERS WARRANTY POLICY

Midwest Equipment Manufacturing will repair or replace, free of charge, any part, or parts that are defective in material or workmanship or both for a period of one year residential use, and 90 days for commercial use. The purchaser will pay transportation charges on parts submitted for replacement under warranty. For warranty service, contact you local dealer from whom the unit was purchased. There are no other express or implied warranties. Some states do not allow limitations on how long an implied warranty lasts, and some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations and exclusions may not apply to you. This warranty gives you specific legal rights and you may also have other rights, which vary from state to state.

MIDWEST EQUIPMENT MANUFACTURING

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