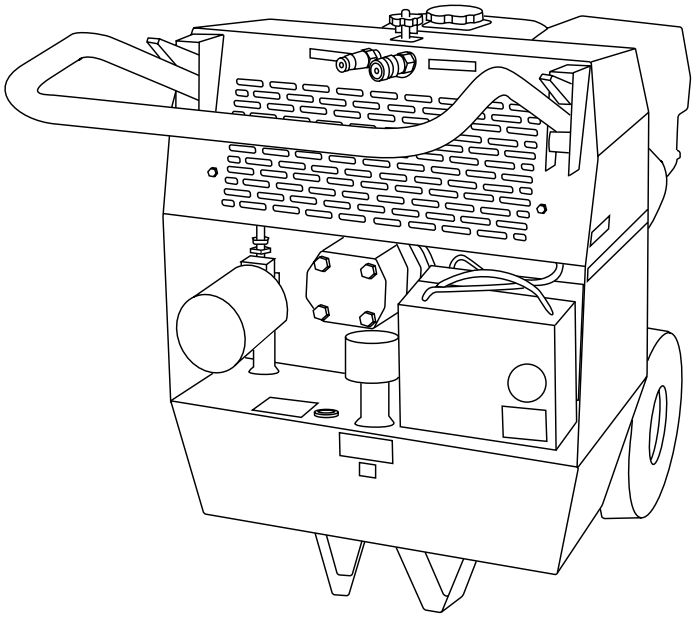
INSTRUCTION MANUAL

Fairmont



F09 / 49617
F13 / 49618
PORTABLE HYDRAULIC POWER UNITS

Read and **understand** all of the instructions and safety information in this manual before operating or servicing this tool.

999 3166.4 REV 1

12/99

Table of Contents

Description

The Fairmont Portable Hydraulic Power Units are lightweight power sources intended for use with open-center hydraulic tools. The F09 provides a variable flow of 18.9 to 37.9 liters per minute (5 to 10 gallons per minute) and a maximum pressure of 124 Bar (1800 psi). The F13 provides a variable flow of 30 to 33 liters per minute (8 to 9 gallons per minute) and a maximum pressure of 140 Bar (2000 psi).

Their compact size and light weight allow use at remote worksites that might not be accessible by a larger power unit or hydraulic truck. The ability to get close to the work area allows the use of shorter hydraulic hoses, increasing tool efficiency.

The simple design of the hydraulic circuit and reliable Honda gasoline-powered engine ensure years of trouble-free operation, when serviced according to the maintenance schedule.

Safety

Safety is essential in the use and maintenance of Fairmont tools and equipment. This instruction manual and any markings on the tool provide information for avoiding hazards and unsafe practices related to the use of this tool. Observe all of the safety information provided.

Purpose

This instruction manual is intended to familiarize all personnel with the safe operation and maintenance procedures for the Fairmont F09/49617 (Serial Code GBR) and F13/49618 (Serial Code GBT) Portable Hydraulic Power Units.

Keep this manual available to all personnel.

Replacement manuals are available upon request at no charge.

Purchase Record

When the tool is received, complete the following record:

Model Number: _____

Serial Number: _____

Date of Purchase: _____

Name of Fairmont Dealer: _____

A date code follows the serial number. The date code consists of two alpha characters which identify year and month of manufacture as follows:

Year	Code	Month	Code
1999	R	Jan	A
2000	S	Feb	B
2001	T	March	C
2002	V	April	D
2003	W	May	E
2004	X	June	F
2005	Y	July	G
2006	Z	Aug	H
		Sept	J
		Oct	K
		Nov	L
		Dec	M

KEEP THIS MANUAL

IMPORTANT SAFETY INFORMATION

SAFETY ALERT SYMBOL

This symbol is used to call your attention to hazards or unsafe practices which could result in an injury or property damage. The signal word, defined below, indicates the severity of the hazard. The message after the signal word provides information for preventing or avoiding the hazard.

⚠DANGER

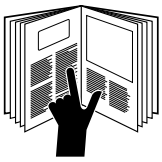
Immediate hazards which, if not avoided, WILL result in severe injury or death.

⚠WARNING

Hazards which, if not avoided, COULD result in severe injury or death.

⚠CAUTION

Hazards or unsafe practices which, if not avoided, MAY result in injury or property damage.



⚠DANGER

Read and understand all of the instructions and safety information in this manual before operating or servicing this tool.

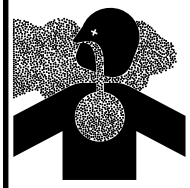
Failure to observe this warning will result in severe injury or death.

⚠DANGER

Fuel is flammable and explosive.

- Stop engine before filling fuel tank.
- Do not fill fuel tank when engine is hot.
- Do not fill fuel tank near an open flame, sparks, or when smoking.

Failure to observe this warning will result in severe injury or death.



⚠WARNING

Do not run power unit engine in a confined area.

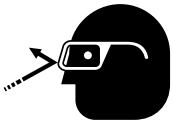
Engine exhaust fumes are toxic. If inhaled, exhaust fumes can cause injury or death.

⚠WARNING

Skin injection hazard:

Oil under pressure easily punctures skin causing serious injury, gangrene or death. If you are injured by escaping oil, seek medical attention immediately.

- Do not use fingers or hands to check for leaks.
- Do not hold hose or couplers while the hydraulic system is pressurized.
- Depressurize the hydraulic system before servicing or disconnecting hoses.



⚠WARNING

Wear eye protection when operating or servicing this tool.

Failure to wear eye protection can result in serious eye injury from flying debris or hydraulic oil.

⚠WARNING

Wear hearing protection when using this tool.

Failure to observe this warning can result in serious injury.

⚠WARNING

Do not disconnect tool, hoses or fittings while the power source is running or if the hydraulic fluid is hot. Hot hydraulic fluid can cause serious burns.

IMPORTANT SAFETY INFORMATION

⚠WARNING

- Do not operate power unit without safety guards in place.
- Keep all parts of the body and loose clothing away from the engine fan.

⚠WARNING

Engine, exhaust system, and other components will be hot during and after operation. Use care when working around the power unit. Hot surfaces can cause serious burns.

⚠WARNING

Do not let power unit engine run unattended. Monitor the engine so that it can be shut down immediately in case of a malfunction.

Failure to observe this warning can result in severe injury or death.

⚠CAUTION

- Inspect the hydraulic hoses and couplings every operating day. Repair or replace if leakage, cracking, wear, or damage is evident. Damaged hoses or couplings can fail, resulting in injury or property damage.
- Use this power source for manufacturer's intended purpose only. Use other than that which is described in this manual can result in injury or property damage.
- Make sure all bystanders are clear of the work area when handling, starting, and operating the power source. Nearby personnel can be injured by flying parts in the event of a tool malfunction.

⚠CAUTION

Use appropriate lifting equipment. Make sure all components used to lift this power unit are rated for 90 kg (200 lbs) and are securely attached to the frame of the power unit. Inadequate components may fail and cause the power unit to fall, resulting in injury or property damage.

⚠CAUTION

Hydraulic oil can cause skin irritation.

- Handle the tool and hoses with care to prevent skin contact with hydraulic oil.
- In case of accidental skin contact with hydraulic oil, wash the affected area immediately to remove the oil.

Failure to observe these precautions can result in injury.

IMPORTANT

Procedure for connecting or disconnecting hydraulic hoses, fittings or components:

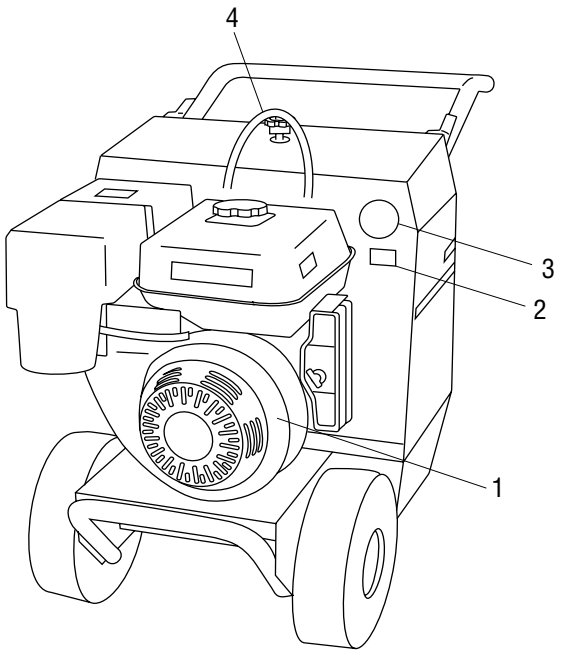
1. Rotate the flow control knob to the OFF position.
2. Switch the engine OFF.
3. Follow the sequence under Hose Connections to prevent pressure buildup. In case some pressure has built up, loosen hoses, fittings or components slowly.

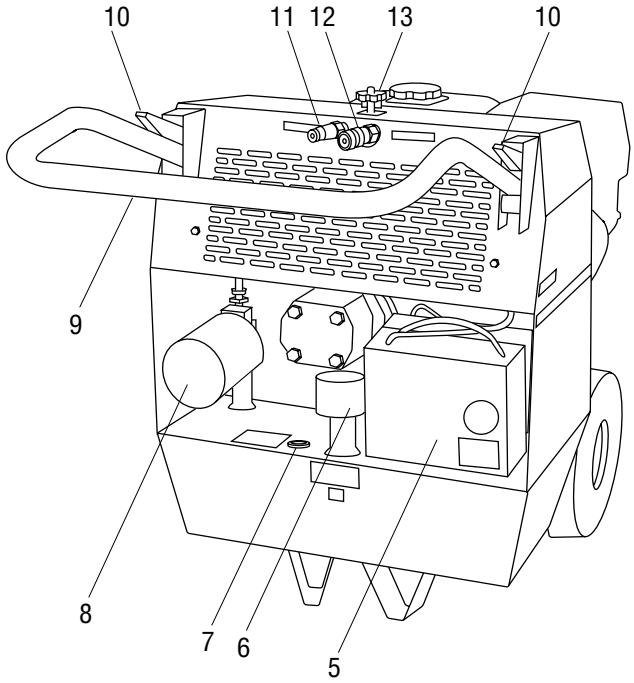
IMPORTANT

Emergency stop procedure: Switch the engine OFF.

Note: Keep decals clean and legible. Replace decals when necessary.

Identification





Parts of the F09 and F13 Portable Hydraulic Power Units

1. Gasoline-Powered Engine
2. Serial Number
3. Hour Meter
4. Lifting Hook
5. Battery
6. Hydraulic Reservoir Cap
7. Hydraulic Oil Sight Gauge
8. Hydraulic Fluid Filter
9. Handle
10. Handle Release Levers
11. Hydraulic Pressure Coupler
12. Hydraulic Tank Coupler
13. Flow Control Knob

Specifications

Overall Physical Dimensions

Mass/Weight (Dry) ..... 64 kg (143 lbs)
Length ..... 673 mm (26.5")
Width ..... 508 mm (20.0")
Height ..... 699 mm (27.5")

Battery

Output ..... 12 Volts

Hydraulic Characteristics

Type of Hydraulic System ..... Open-Center
Pressure Port ..... 3/8" Male HTMA Quick Disconnect
Tank Port ..... 3/8" Female HTMA Quick Disconnect
Output (Maximum) for F09
  Flow ..... 18.9 to 37.9 l/min (5 to 10 gpm)
  Pressure ..... 104.5 Bar (1800 psi)
Output (Maximum) for F13
  Flow ..... 30 to 33 l/min (8 to 9 gpm)
  Pressure ..... 140 Bar (2000 psi)
Hydraulic Fluid Capacity ..... 18.9 liters (5 gallons)
Filtration ..... 10 Micron (Nominal)

Recommended Hydraulic Fluids

Use any non-detergent, petroleum-based hydraulic fluid which meets these specifications:

Metric

Viscosity (Measured in Centistokes)
  38° C ..... 30 to 48 cSt
  99° C ..... 4.2 cSt Minimum
Flash Point ..... Equal to or Greater Than 170° C
Pour Point ..... Equal to or Less Than -34° C

SAE

Viscosity (Measured in Saybolt Universal Seconds)
  100° F ..... 140 to 225 SUS
  210° F ..... 40 SUS Minimum
Flash Point ..... Equal to or Greater Than 340° F
Pour Point ..... Equal to or Less Than -30° F

Some hydraulic fluids which meet these criteria include, but are not limited to, the following:

Manufacturer	Catalog Number
American Oil Co. (Amoco)	Rykon 32 Rykon 46
Conoco	Super Hydraulic Oil 5W-20
Phillips Petroleum Co.	Magnus A 150 Magnus A 215
Sun Oil Co. (Sunoco)	Sun Hydraulic Oil 2105
Texaco	Rando B Rando HDAZ Rando HD32 Rando HD46
Union Oil Co.	Unax AW 150 Unax AW 215

Engine Characteristics

See engine owner's manual.

Hoses and Fittings

Installation and Maintenance

See publication 999 3032.3, SAE J1273 (Hose and Hose Assemblies).

Replacement

Refer to a Fairmont catalog or publication 999 1032.2, Low Pressure Quick Couplers, Adapters and Hoses.

Hose Connections

Power Source Port Identification

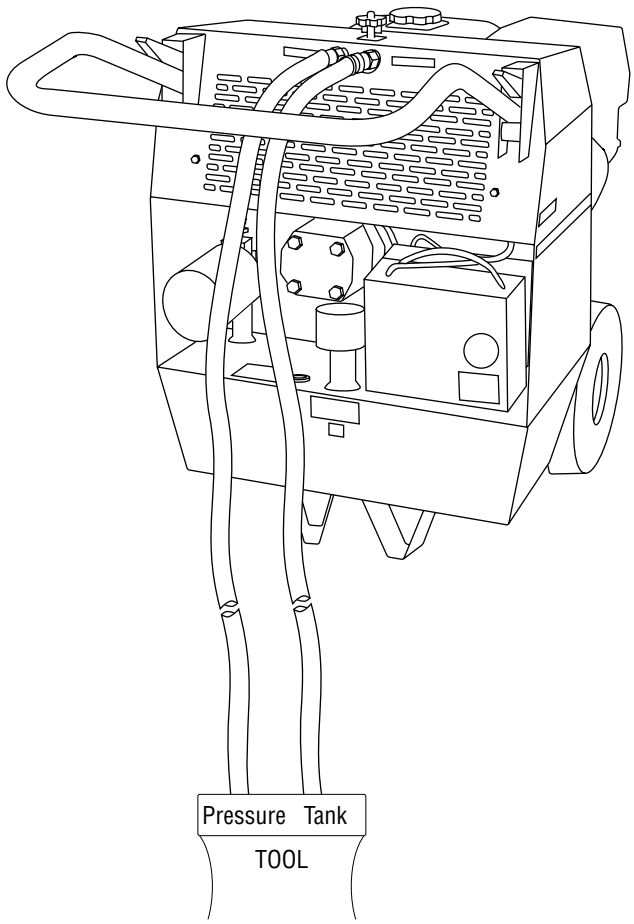
The pressure port on the power unit is the left port (labeled PRESSURE). The tank port is the right port (labeled RETURN).

Connecting Hoses

1. Rotate the flow control knob completely counter-clockwise (OFF).
2. Switch the engine OFF.
3. Connect the tank hose to the tank port on the power source, and then to the tank port on the tool.
4. Connect the pressure hose to the pressure port on the tool, and then to the pressure port on the power source.

Disconnecting Hoses

1. Rotate the flow control knob completely counter-clockwise (OFF).
2. Switch the engine OFF.
3. Disconnect the pressure hose from the power source, and then from the tool.
4. Disconnect the tank hose from the tool, and then from the power source.



Operation

⚠DANGER

Fuel is flammable and explosive.

- Stop engine before filling fuel tank.
- Do not fill fuel tank when engine is hot.
- Do not fill fuel tank near an open flame, sparks, or when smoking.

Failure to observe this warning will result in severe injury or death.

⚠WARNING

Do not run power unit engine in a confined area.

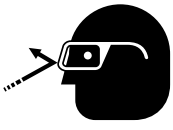
Engine exhaust fumes are toxic. If inhaled, exhaust fumes can cause injury or death.

⚠WARNING

Skin injection hazard:

Oil under pressure easily punctures skin causing serious injury, gangrene or death. If you are injured by escaping oil, seek medical attention immediately.

- Do not use fingers or hands to check for leaks.
- Do not hold hose or couplers while the hydraulic system is pressurized.
- Depressurize the hydraulic system before servicing.



⚠WARNING

Wear eye protection when operating or servicing this tool.

Failure to wear eye protection can result in serious eye injury from flying debris or hydraulic oil.

⚠WARNING

Do not disconnect tool, hoses or fittings while the power source is running or if the hydraulic fluid is hot. Hot hydraulic fluid can cause serious burns.

⚠WARNING

- Do not operate power unit without safety guards in place.
- Keep all parts of the body and loose clothing away from the engine fan.

⚠WARNING

Engine, exhaust system, and other components will be hot during and after operation. Use care when working around the power unit. Hot surfaces can cause serious burns.

IMPORTANT

Procedure for connecting or disconnecting hydraulic hoses, fittings or components:

1. Rotate the flow control knob to the OFF position.
2. Switch the engine OFF.
3. Follow the sequence under Hose Connections to prevent pressure buildup. In case some pressure has built up, loosen hoses, fittings or components slowly.

IMPORTANT

Emergency stop procedure: Switch the engine OFF.

Operation (cont'd)

Transportation

⚠CAUTION

Use appropriate lifting equipment. Make sure all components used to lift this power unit are rated for 90 kg (200 lbs) and are securely attached to the frame of the power unit. Inadequate components may fail and cause the power unit to fall, resulting in injury or property damage.

1. Stop the power unit. See Stopping the Power Unit under Operation.
2. Allow the power unit to cool.
3. Attach lifting equipment securely to the frame of the unit.

Pre-Start

1. Position the power source on firm level ground.
2. Refer to the engine owner's manual to:
   - Check the engine oil level. Add oil if necessary.
   - Check the fuel level. Add fuel if necessary.
   - Verify that any other maintenance has been performed according to the schedule.
3. Connect the hoses and tool to the power unit. See Hose Connections in this manual.

Starting the Power Unit

1. Rotate the flow control knob completely counter-clockwise (OFF).
2. Refer to the engine owner's manual to start the engine. Allow the engine to idle for a few minutes to warm the hydraulic fluid.
3. Move the control lever to the proper setting.
4. Rotate the flow control knob clockwise (ON) to supply hydraulic power to the tool.
5. Refer to the tool owner's manual for tool operating instructions.

Tips for cold weather operation:

- See the engine manufacturer's cold start instructions.
- Allow the engine a longer idle time to warm the hydraulic fluid (with the hydraulic control knob in the OFF position). Warm hydraulic fluid puts less internal pressure on the hoses than cold hydraulic fluid.

Stopping the Power Unit

⚠CAUTION

Set the flow control knob to the OFF position before shutting the engine off. Shutting the engine off with the control knob in the ON position will allow gasoline into the exhaust system.

Failure to observe this precaution can result in property damage.

1. Rotate the flow control knob completely counter-clockwise (OFF).
2. Move the engine control lever to the slowest setting. Allow the engine to idle for a few moments.
3. Switch the engine OFF.

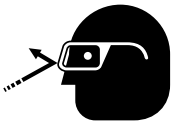
Maintenance

⚠WARNING

Skin injection hazard:

Oil under pressure easily punctures skin causing serious injury, gangrene or death. If you are injured by escaping oil, seek medical attention immediately.

- Do not use fingers or hands to check for leaks.
- Do not hold hose or couplers while the hydraulic system is pressurized.
- Depressurize the hydraulic system before servicing.



⚠WARNING

Wear eye protection when operating or servicing this tool.

Failure to wear eye protection can result in serious eye injury from flying debris or hydraulic oil.

⚠WARNING

Do not disconnect tool, hoses or fittings while the power source is running or if the hydraulic fluid is hot. Hot hydraulic fluid can cause serious burns.

⚠CAUTION

Do not overfill the engine crankcase or the hydraulic reservoir. Overfilling either of these will cause severe internal damage and void the warranty.

Failure to observe this precaution will result in damage to the power unit.

IMPORTANT

Procedure for connecting or disconnecting hydraulic hoses, fittings or components:

1. Rotate the flow control knob to the OFF position.
2. Switch the engine OFF.
3. Follow the sequence under Hose Connections to prevent pressure buildup. In case some pressure has built up, loosen hoses, fittings or components slowly.

MAINTENANCE SCHEDULE

Use this schedule to maximize the power unit's service life. See the tool owner's manual and the engine owner's manual for the maintenance of those items.

Note: Keep decals clean and legible. Replace decals when necessary.

Every 5 Hours

1. Check the engine crankcase oil level. See the engine owner's manual.
2. Check the hydraulic reservoir oil level. Add oil until the sight tube indicates FULL. See Recommended Hydraulic Fluids under Specifications.

Every 10 Hours

1. Wipe all surfaces clean.
2. Inspect the hydraulic hoses and fittings for signs of leaks, cracks, wear or damage. Replace if necessary.

Every Month

Perform a thorough inspection of the hydraulic hoses and fittings as described in publication 999 3032.3, SAE J1273 (Hose and Hose Assemblies).

Every 100 Hours or Annually

Note: Perform this procedure more often if the power source is used in cold, moist or dusty conditions.

1. Drain the hydraulic fluid reservoir.
2. Clean and flush the reservoir. Change the hydraulic filter. Fill the reservoir with new, clean hydraulic fluid. Add oil until the sight tube indicates FULL.
3. Operate the power unit to circulate the oil through the hydraulic system. Stop the power unit and check the hydraulic fluid level. Add oil until the sight tube indicates FULL.
4. Dispose of used oil and filter in accordance with federal, state and local laws.

Annual Inspection

If required by your organization's regulations, have the tool inspected by an authorized Fairmont service center.

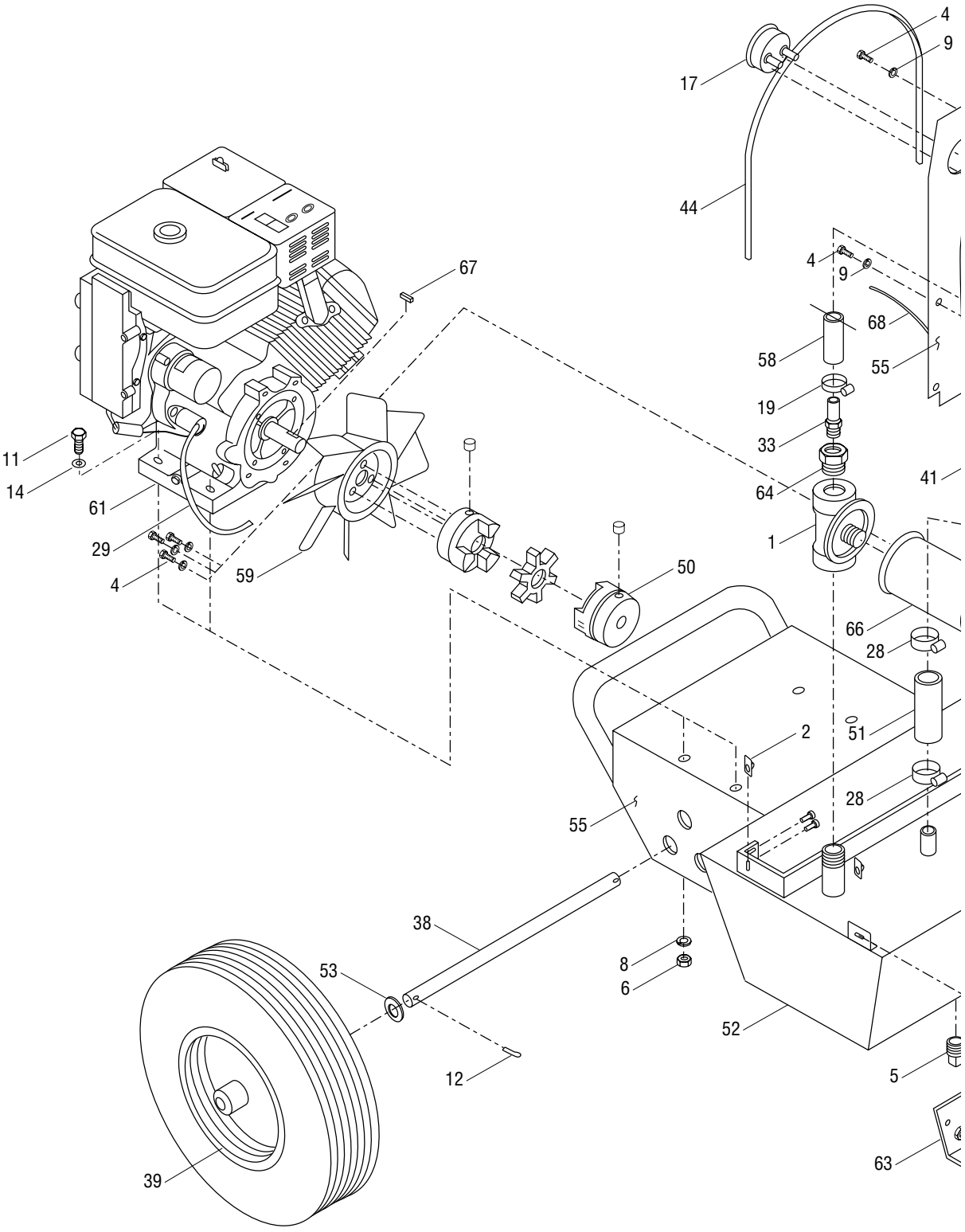
Troubleshooting

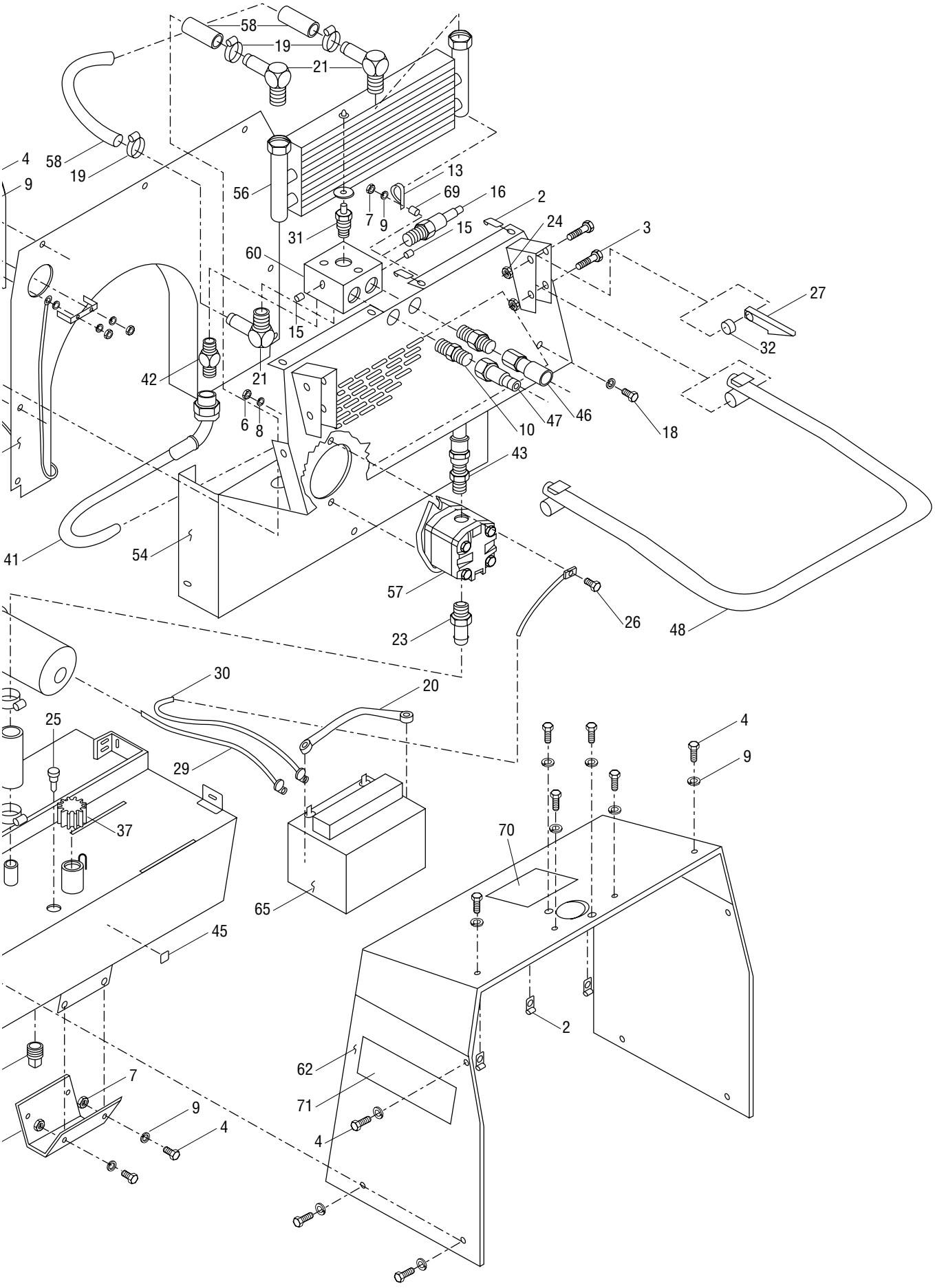
Before troubleshooting, determine whether the problem is in the tool, the hoses, or the power source. Substitute a tool, hoses, or power source known to be in good working order to eliminate the item that is not operating.

If the problem is in the tool, see the troubleshooting section of the tool instruction manual. If the problem is in the power source, see the troubleshooting table below.

PROBLEM	PROBABLE CAUSE	PROBABLE REMEDY
Engine trouble.		See engine owner's manual.
Tool doesn't operate.	Improper power source.	Verify that the power source meets the tool's specifications.
	Hydraulic fluid level low.	Check the fluid level. Check system for leaks.
	Incorrect hydraulic fluid viscosity.	Use hydraulic fluid with the correct viscosity. See Recommended Hydraulic Fluids.
	Power source output is low.	Measure the flow, pressure and back pressure of the power source. If output is low, send the power source to an authorized Fairmont service center for repair.
Tool operates slowly or erratically.	Hydraulic fluid cold.	Allow fluid to warm to the operating temperature. Actuate the tool intermittently to reduce the warming time.
	Hydraulic fluid level low.	Check the fluid level. Check system for leaks.
	Incorrect hydraulic fluid viscosity.	Use hydraulic fluid with the correct viscosity. See Recommended Hydraulic Fluids.
	Power source output is low.	Measure the flow, pressure and back pressure of the power source. If output is low, send the power source to an authorized Fairmont service center for repair.
Tool feels hot.	Hydraulic fluid level low.	Check the fluid level. Check system for leaks.
	Incorrect hydraulic fluid viscosity.	Use hydraulic fluid with the correct viscosity. See Recommended Hydraulic Fluids.
	Hydraulic fluid dirty.	Replace the hydraulic oil and filter.
	Power source output is low.	Measure the flow, pressure and back pressure of the power source. If output is low, send the power source to an authorized Fairmont service center for repair.

Exploded View

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Parts List

KEY	UPC NO.	PART NO.	DESCRIPTION	QTY.
1	49684	504 9684.0	Filter	1
2	49626	504 9626.3	Nut, Jam	20
3	49685	504 9685.9	Bolt, 3/8"	4
4	49627	504 9627.1	Bolt, 1/4"	29
5	49686	504 9686.7	Plug, Magneto	1
6	49687	504 9687.5	Nut, 3/8"	6
7	49628	504 9628.0	Nut, 1/4"	6
8	49630	504 9630.1	Washer, 3/8" Lock	6
9	49631	504 9631.0	Washer, 1/4" Lock	31
10	49688	504 9688.3	Fitting	2
11	49689	504 9689.1	Bolt, 3/8"	4
12	49690	504 9690.5	Pin, 1/8" Cotter	2
13	49632	504 9632.8	Clamp	2
14	49691	504 9691.3	Washer, 3/8"	4
15	49692	504 9692.1	Fitting	2
16	49693	504 9693.0	Valve, Relief	1
17	49694	504 9694.8	Gauge, Hour Meter	1
18	49695	504 9695.6	Bolt, 1/4"	2
19	49644	504 9644.1	Clamp, Hose	4
20	49696	504 9696.4	Strap	1
21	49645	504 9645.0	Fitting	3
22	49697	504 9697.2	Tie, 8"	6
23	49698	504 9698.0	Fitting	1
24	49699	504 9699.9	Nut, 3/8"	4
25	49651	504 9651.4	Gauge, Sight	1
26	49700	504 9700.6	Bolt, 3/8"	2
27	49701	504 9701.4	Latch, Handle	2
28	49702	504 9702.2	Clamp, Hose	2
29	49703	504 9703.0	Cable, Positive (Red)	1
30	49704	504 9704.9	Cable, Negative (Blk)	1
31	49653	504 9653.0	Valve	1
32	49672	504 9672.7	Spacer, Handle	2
33	49705	504 9705.7	Fitting	1
37	49709	504 9709.0	Cap	1

Parts List (cont'd)

KEY	UPC NO.	PART NO.	DESCRIPTION	QTY.
38	49710	504 9710.3	Axle	1
39	49711	504 9711.1	Wheel	2
40	49712	504 9712.0	Container	1
41	49713	504 9713.8	Hose, Pressure	1
42	49714	504 9714.6	Fitting	1
43	49715	504 9715.4	Fitting	1
44	49716	504 9716.2	Trim, 1/16"	1
45	49717	504 9717.0	Bumper, Hood	1
46	49718	504 9718.9	Coupler, Hydraulic	1
47	49719	504 9719.7	Coupler, Hydraulic	1
48	49720	504 9720.0	Handle	1
49	49721	504 9721.9	Graphic Set	1
50	49722	504 9722.7	Coupler, Pump Drive	1
51	49723	504 9723.5	Hose, Suction	1
52	49724	504 9724.3	Tank, Hydraulic	1
53	49725	504 9725.1	Spacer, Axle	2
54	49726	504 9726.0	Grill	1
55	49727	504 9727.8	Guard, Fan	1
56	49728	504 9728.6	Cooler, Hydraulic	1
57	49729	504 9729.4	Pump, for F09 only	1
57	49706	504 9706.5	Pump, for F13 only	1
58	49730	504 9730.8	Hose, Hydraulic Return	2
59	49731	504 9731.6	Fan	1
60	49732	504 9732.4	Manifold, Hydraulic	1
61	49733	504 9733.2	Engine, Honda 9 H.P., for F09 only	1
61	49614	504 9614.0	Engine, Honda 13 H.P., for F13 only	1
62	49734	504 9734.0	Hood	1
63	49735	504 9735.9	Foot, Rear	1
64	49736	504 9736.7	Fitting Bushing	1
65	49737	504 9737.5	Battery	1
66	49738	504 9738.3	Element, Hydraulic Filter	1
67	49739	504 9739.1	Key, Engine/Fan	1
68	49740	504 9740.5	Wire, Hour Meter	1
69	49741	504 9741.3	Spacer	2
70	49749	504 9749.9	Decal, Top Panel	1
71	49747	504 9747.2	Decal, Side Panel, for F09 only	2
71	49748	504 9748.0	Decal, Side Panel, for F13 only	2

GREENLEE TEXTRON

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