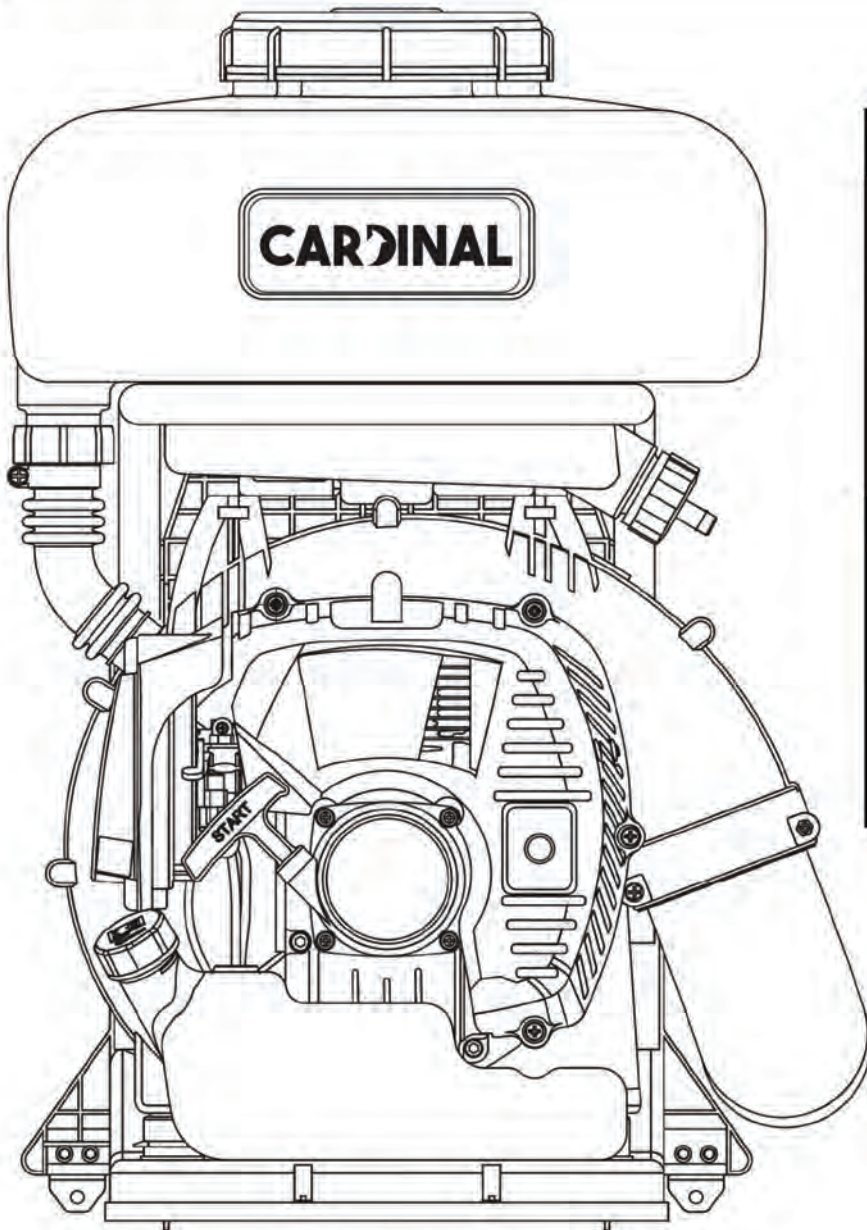


CARDINAL

CMD65
BACKPACK FOGGER

Operation Manual



FIND OUR ASSEMBLY GUIDE ON

You Tube

- 1** Go to www.youtube.com
- 2** Type in the Search Bar
Assemble Cardinal Fogger
- 3** Choose the Video Titled
*How to Assemble a Cardinal
Backpack Fogger CMD65*

ATTENTION: USE ONLY 50:1 PREMIX 2 STROKE ENGINE FUEL OR
A 50:1 COMBINATION OF 91 OCTANE GASOLINE AND 2 STROKE ENGINE OIL

Table of Contents	2
Package Contents	3
Assembly Guides	
<i>Fogger Liquid Assembly</i>	4
<i>Tree Top Liquid Assembly</i>	6
<i>Leaf Blower Assembly</i>	8
<i>Duster Assembly</i>	10
Safety Precautions and Warnings	14
Fueling	15
Start Up Guide	16
Stopping Your Engine	17
Adding Chemicals	18
Adjusting Options	18
Technical Specifications	19
Features and Use	19
Troubleshooting	
<i>Carburetor Adjustment Guide</i>	20
<i>Leaking Tank Quick Fix</i>	21
<i>More Troubleshooting</i>	2
Turbo Boost Assembly	26
Spare Parts Manual	34
Warranty Statement	40

CARDINAL

CMD65: Package Contents

www.cardinal-sprayers.com



OPTIONAL



OPTIONAL



TMD14 BACKPACK FOGGER

- A. RIBBED TUBE
- B. CONNECTING PIPE
- C. BLOWER PIPE
- D. FAN NOZZLE

OPTIONAL 1: EXTENSION PIPE

OPTIONAL 2: ELBOW TUBE

ADDITIONAL PARTS

- 2 CLEAR TUBES
- 2 HOSE CLAMPS
- 1 DUSTER TANK
- 1 DUSTER TUBE
- 1 SCREED
- 1 GROUNDING CHAIN

CARDINAL

CMD65: Fogger Standard Assembly Pt 1

www.cardinal-sprayers.com



1 Remove all parts from your mistblower box, including the tool kit bag



2 Fasten the ribbed tube (A) to the blower elbow



3 Secure the ribbed tube with a hose clamp to the blower elbow



4 Attach the connecting pipe (B) and secure it to the ribbed tube with a hose clamp



5 Attach the blower pipe (C) by meeting the raised dimple to the slot guide



6 Twist to lock in place

CARDINAL

CMD65: Fogger Standard Assembly Pt 2

www.cardinal-sprayers.com



7 Attach the fan nozzle (D) to the end of the blower pipe



8 Slip the throttle handle over the connecting pipe (B) and tighten with the tool kit's screw



9 Attach the 1st clear tube to the base of the chemical tank



10 Secure clear tube's other end to the back of the throttle and the 2nd tube to the front



11 Wrap the 2nd tube around the blower pipe (C) and attach its end to the fan nozzle (D)



12 To begin fogging, add 50:1 Pre Mix Fuel (fuel not included)

CARDINAL

CMD65: Tree Top Assembly Pt 1

www.cardinal-sprayers.com



1 Remove all parts from your mistblower box, including the tool kit bag



2 Fasten the ribbed tube (A) to the blower elbow



3 Secure the ribbed tube with a hose clamp to the blower elbow



4 Attach the connecting pipe (B) and secure it to the ribbed tube with a hose clamp



5 Attach the blower pipe (C) by meeting the raised dimple to the slot guide



6 Twist to lock in place

CARDINAL

CMD65: Tree Top Assembly Pt 2

www.cardinal-sprayers.com



7 Attach the elbow tube to the blower pipe (C) and secure the fan nozzle (D) to its end



8 Slip the throttle over the connecting pipe (B) and tighten with the tool kit's screw



9 Attach the 1st clear tube to the base of the chemical tank



10 Secure clear tube's other end to the back of the throttle and the 2nd tube to the front



11 Wrap the 2nd tube around the elbow tube and attach its end to the fan nozzle (D)



12 To begin fogging, add 50:1 Pre Mix Fuel (fuel not included)

CARDINAL

CMD65: Leaf Blower Assembly Pt 1

www.cardinal-sprayers.com



1 Remove all parts from your mistblower box, including the tool kit bag



2 Fasten the ribbed tube (A) to the blower elbow



3 Secure the ribbed tube with a hose clamp to the blower elbow



4 Attach the connecting pipe (B) and secure it to the ribbed tube with a hose clamp



5 Attach the blower pipe (C) by meeting the raised dimple to the slot guide



6 Twist to lock in place

CARDINAL

CMD65: Leaf Blower Assembly Pt 2

www.cardinal-sprayers.com



7 Slip the throttle handle over the connecting pipe



8 Tighten with the screw found in the tool kit bag



9 To begin blowing leaves, add 50:1 Pre Mix Fuel (fuel not included)

CARDINAL

CMD65: Duster Assembly Pt 1

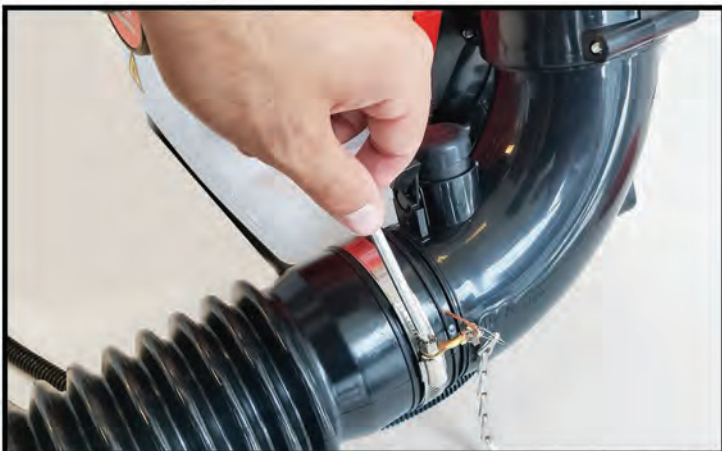
www.cardinal-sprayers.com



1 Remove all parts from your mistblower box, including the tool kit bag



2 Attach the grounding chain* to the hose clamp and put the copper wire inside the ribbed tube



3 Secure the ribbed tube with the hose clamp to the blower elbow



4 Attach the connecting pipe (B) and secure it to the ribbed tube with a hose clamp



5 Attach the blower pipe (C) by meeting the raised dimple to the slot guide



6 Twist to lock in place

* During use, the grounding chain should hang from the ribbed tube and drag on the ground, to reduce static electricity.



7 Attach the fan nozzle (D) to the end of the blower pipe



8 Slip the throttle handle over the connecting pipe (B) and tighten with the tool kit's screw



9 Remove the rubber stopper from the blower elbow



10 Remove the misting cap from the right side of the machine (when facing the engine)



11 Replace the misting Cap with the duster cap



12 Attach the duster tube to the duster cap and tighten the clamp



13 Attach the bottom end of the duster tube to the top of the blower elbow



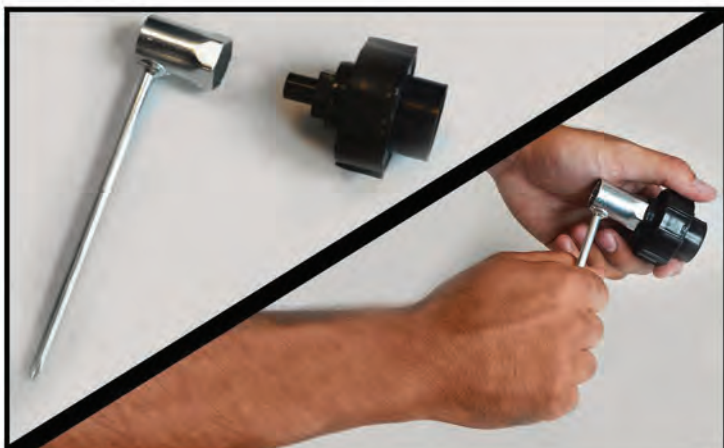
14 On the opposite side, remove the pipe clamp from the black tube



15 Remove the valve from the tank



16 Disconnect the tube from the valve. Remove the tube and basket from the tank



17 Use the wrench to disassemble the valve



18 Insert the smaller portion of the valve into the opposite side a twist together



19 Reattach the valve to the base of the tank and retighten the black tube to the valve



20 Locate the top of the valve inside the large chemical tank



21 Insert the duster tank into the larger chemical tank



22 Insert the duster tank's round opening into the top of the valve



23 To begin dusting, use 50:1 Pre Mix Fuel. (Fuel Not Included)

SAFETY PRECAUTIONS AND WARNINGS

Operator Precautions

1. This product emits carbon monoxide, an invisible and odorless toxin. Do not run this product indoors at any time.
2. Always turn engine off before adding fuel to the tank.
3. To avoid electrocution, do not touch the cap of the spark plug or wiring while the engine is on.
4. Do not touch the surface of the muffler and the cylinder while the engine is running. It is extremely hot.

Equipment Warnings

1. The Cardinal CMD65's 2 stroke engine runs on 50:1 fuel mix. Use 91 octane gas and two-cycle engine oil. Note: 50:1 pre-mix fuel is ideal for this product as it contains fuel stabilizers to ensure longevity of the equipment.
2. After starting the engine, keep the throttle at a low speed for several minutes before running at full throttle.
3. Gasoline is an extremely flammable fuel. When operating, keep away from any flames. Do not smoke while operating.
4. Do not spray in the direction of others.

Chemical Handling

1. Wear ear protection.
2. Wear eye protection.
3. Use a mask to protect mouth and face against dust and pesticides.
4. Wear closed-toed protective shoes.
5. Wear gloves to avoid contact with pesticides.
6. Wear proper clothing to protect arms and legs to avoid contact with pesticides.
7. After spraying, wash hands and clothing immediately.

FUELING

- This engine is certified to operate on unleaded gasoline and two-stroke engine oil at a mix ratio of 50:1.
- This engine requires a mixture of high-quality gasoline and two-stroke air cooled engine oil.
- Use mid-grade unleaded gasoline with a minimum octane rating of 91 and no more than 10% ethanol content.
- Keep the fuel tank far away from flames or sparks. Do not smoke near fuel.
- When adding pre-mixed fuel to the engine, use a funnel to avoid spillage.
- When the machine is running, do not add more to the fuel tank.
- Open the fuel cap carefully to release any pressure build-up slowly and avoid fuel spillage.
- At the end of a season, drain all fuel from gas tank and use fuel stabilizer to ensure a clear carburetor for your next season.

**ATTENTION: USE ONLY 50:1 PREMIX 2 STROKE ENGINE FUEL
OR A 50:1 COMBINATION OF 91 OCTANE GASOLINE AND 2
STROKE ENGINE OIL**

CARDINAL

CMD65: Start Up Guide

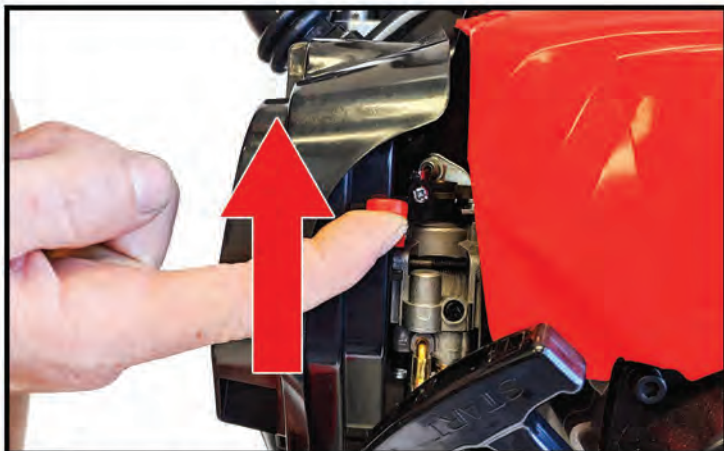
www.cardinal-sprayers.com



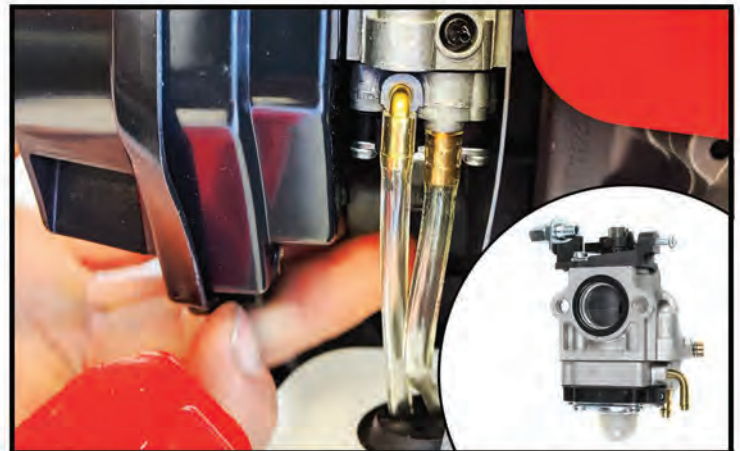
1 Fill the fuel tank with a 2 Stroke 50:1 Pre Mix Fuel for the optimal engine efficiency



2 Move the throttle handle to the On Position labeled "I"



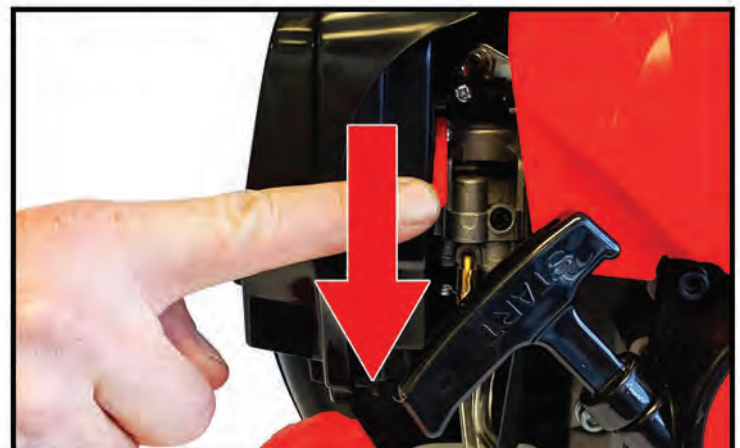
3 Move the choke to the up position



4 To prime the engine, press the carburetor bulb 4-5 times or until fuel runs through the lines



5 Pull the recoil starter cord until the engine turns over and starts



6 Once the engine fires up, slowly move the choke to the down position

IMPORTANT: Before spraying with chemicals, fill the tank with water to make sure the fogger is operating correctly

STOPPING YOUR ENGINE

1. Move the water valve to the closed position to stop the flow of liquid pesticide. Figure 1.
2. Move the throttle lever to the down position (O) to stop the engine. Figure 2.
3. Move the choke to the closed position. Figure 3.

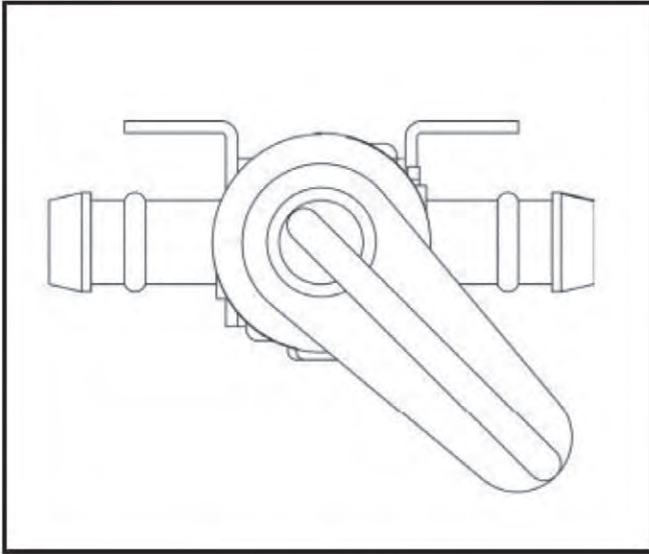


FIGURE 1

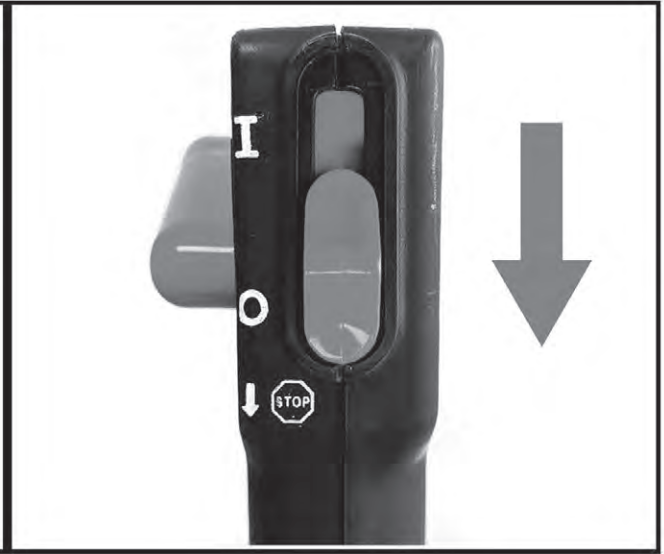


FIGURE 2

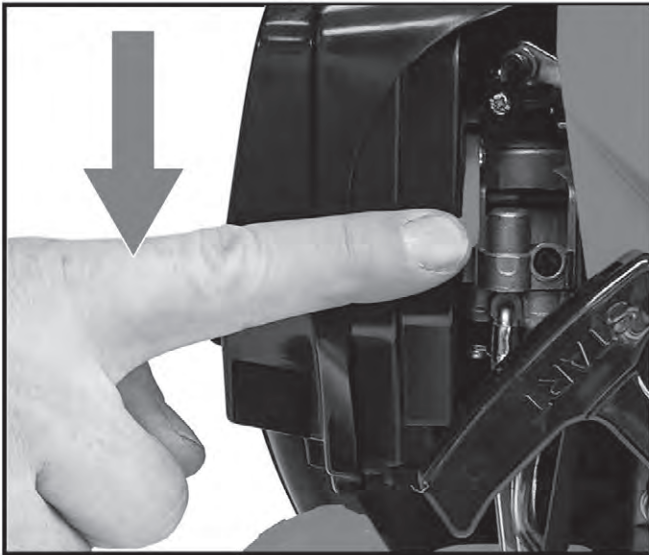


FIGURE 3

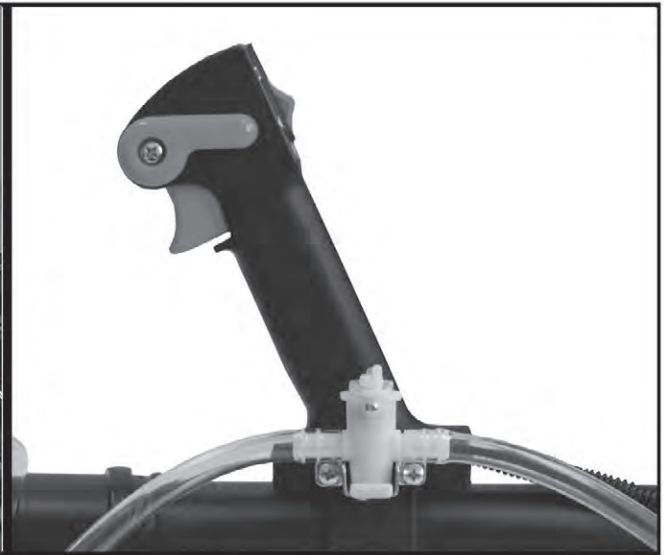


FIGURE 4

ADDING CHEMICALS AND ADJUSTING OPTIONS

Adding Chemicals

Warning- Some chemicals sprayed with the mist blower can contain toxic substances which can lead to serious side effects and injury.

1. Avoid direct contact with chemicals and always follow the instructions of the chemical manufacturer. Always wear the proper clothing and chemical protection.
2. It's important to dilute your chemicals according to the chemical manufacturer's specifications. Never spray undiluted chemicals.
3. Dilute and prepare your chemicals prior to turning on your mist blower.
4. Prepare your chemical and pour into the mist blower water tank outdoors or in a well ventilated area.
5. After spraying, do not keep the spray solution in the tank. Properly dispose of the excess spray solution and rinse your machine after each use.

Adjusting Options

1. **Water Flow**- To adjust water flow use the water valve to increase the flow of water from the tank. See Figure 1.
2. **Water Speed**- To adjust the speed of water use the accelerator to increase blower speed. See Figure 4.
3. **Dust Flow**- To adjust dust flow move lever to the left. Move the lever to the right to reduce dust flow. See Figure 5.
4. **Spray Pattern**- To adjust spray pattern use the small knob on the horn nozzle. 1 being the least amount of flow and 4 being the most. See Figure 6.

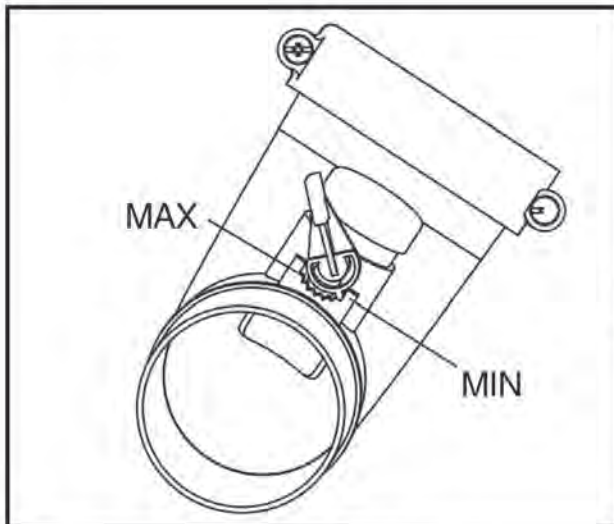


FIGURE 5

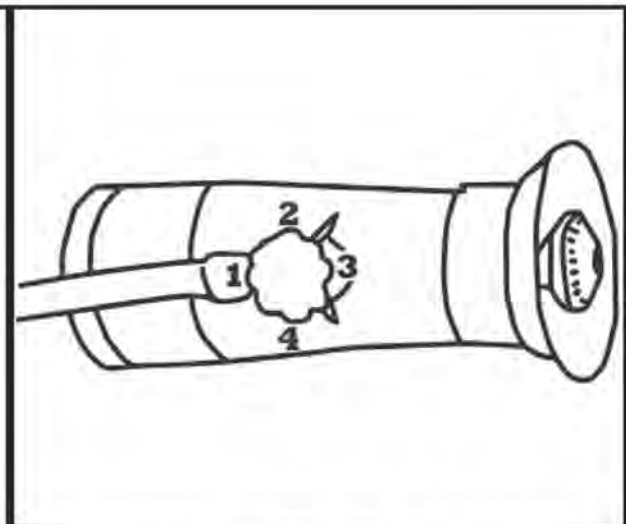


FIGURE 6

TECHNICAL SPECIFICATIONS

Dimensions	18" x 12" x 26"
Net Weight	24 lbs
Tank Capacity	3.7 Gallons (14 Liters)
Engine Size	63cc
Engine Speed	6500RPM
Engine Power	1.5kW
Blower Speed	475 CFM (up to 200mph)
Fuel Type	Recommended 50:1 Premix Fuel OR 50:1 Mixture of 2 Stroke Oil with 91 Octane Gasoline
Spraying Options	Dust or Liquid
Vertical Reach	20ft max (with Elbow)
Horizontal Reach	Up to 40ft

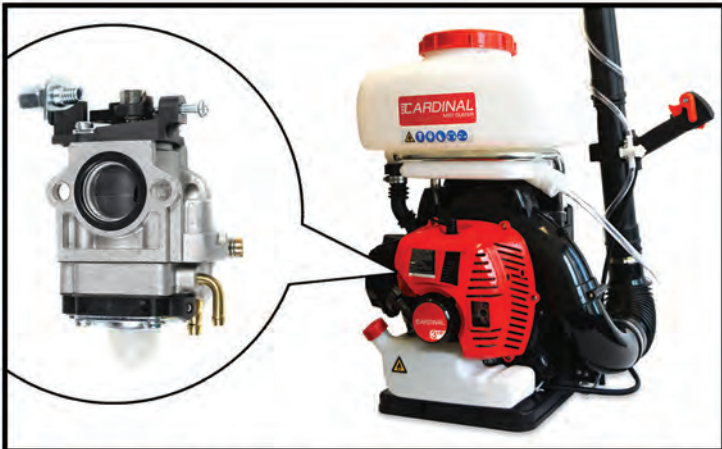
FEATURES & USE

Features	Target Pests	For Use Around
<ul style="list-style-type: none"> • 3-In-One Fogger, Duster, and Leaf Blower • Spray 1 acre in less than 30 minutes • 4X faster than Pump Sprayers • Vertical Range of 20ft • Horizontal Range up to 40ft 	<ul style="list-style-type: none"> • Mosquitoes & Ticks • Ants & Cockroaches • Caterpillars and Worms • Fleas • Biting Flies & Horse Flies • Scorpions & Wasps • Spider Mites • Thrips • Stink Bugs & Beetles • And More 	<ul style="list-style-type: none"> • Commercial & Residential • Farms & Barns • Dairies & Kennels • Livestock • Ornamental Plants • Orchards • Vegetable Gardens • And More

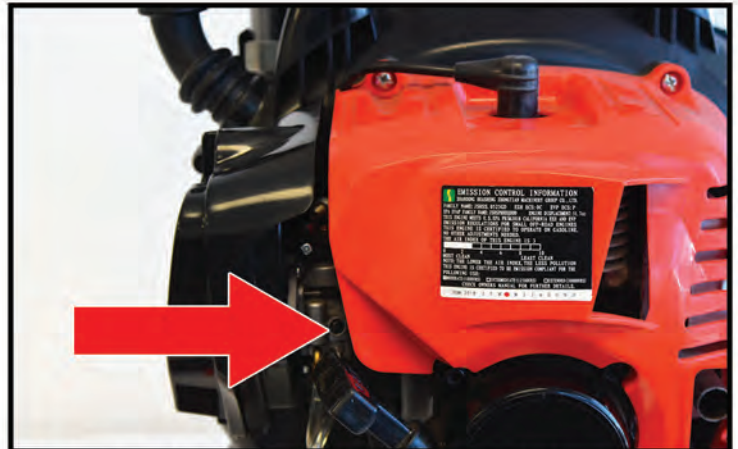
CARDINAL

CMD65: Carburetor Adjustment Guide

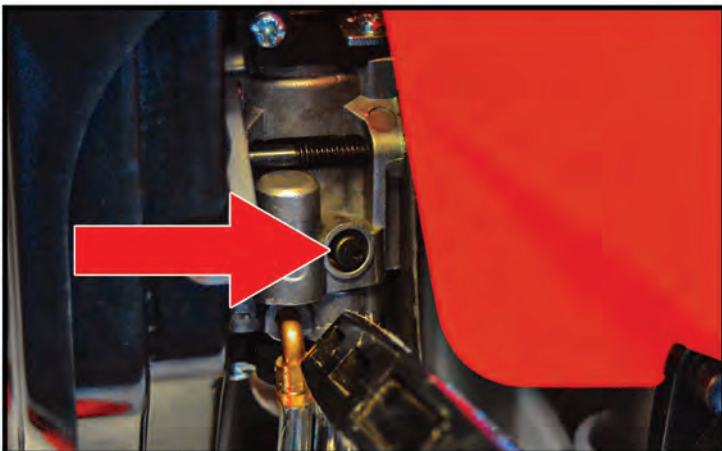
www.cardinal-sprayers.com



1 If your fogger engine is bogging down or only runs with the choke open, follow these steps



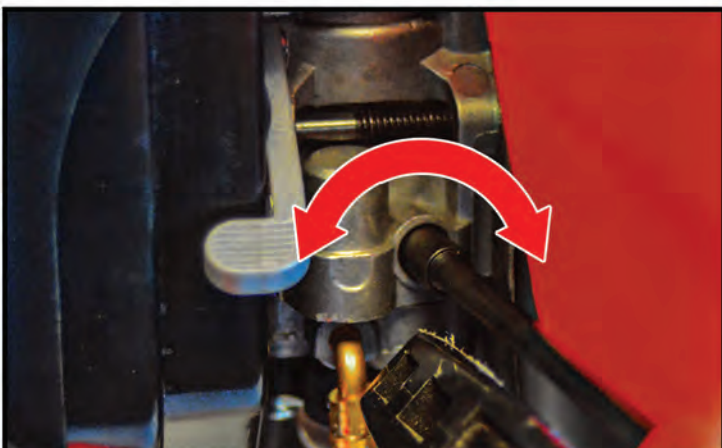
2 Identify the engine's carburetor in between the engine cover and air filter



3 Tune up your carburetor by adjusting the keyhole (pictured above)



4 Use a carburetor adjustment tool* to tune the engine's carburetor *while the engine is running*



5 Turn the tool to the left or right until the engine is running correctly**



6 Use the fogger's throttle handle to listen for a high pitch, steady hum & find the right speed

* The carburetor tool changes the ratio of air and fuel let into the engine. A ratio too high will bog down the engine or too low will choke the engine.

** The engine's carburetor is very sensitive to adjustments. Only make turns in 25° increments (1/4 turns) until the ideal adjustment is achieved.

CARDINAL

CMD65: Leaking Tank Quick Fix

www.cardinal-sprayers.com



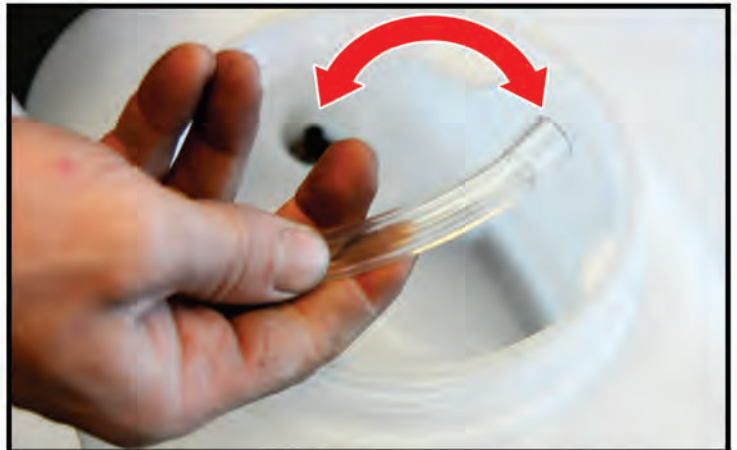
1 If your fogger tank is leaking excessively, follow these steps



2 Remove the cap from the top of the fogger's chemical tank



3 Leaking may be caused by the tubing attached to the strainer



4 If the tubing is loose or disconnected from the base of the tank, reattach the tube



5 Fit the tube tightly around the nozzle at the base of your fogger's chemical tank



6 Dry off your fogger thoroughly and fill the chemical tank with water to monitor leakage*

* If the tank continues to leak, reach out to Tomahawk Power at www.tomahawk-power.com/service or email sales@tomahawk-power.com

MAINTENANCE & TROUBLESHOOTING

Maintenance

Before fixing your equipment, make sure the engine is turned off and completely cooled down.

Spark Plug:

PROBLEM		CAUSE	SOLUTION
No Spark	Spark Plug	1. Spark plug is wet	Dry Spark Plug
		2. Spark plug is dirty	Clean
		3. The insulation is damaged	Replace
		4. Spark gap is off	Adjust
	Ignition coil	1. Wrap of wire damaged	Fix or Replace
		2. Insulation of coil bad	Replace
3. The wire of coil broken		Replace	
Normal Spark	Good Compression ratio	1. Too much fuel in the cylinder	Drain
		2. Water or dirt in the fuel	Replace
	Poor Compression Ratio	1. Cylinder and piston ring worn or torn	Replace
		2. The plug is loose	Tighten
	Carburetor Not Fueling	1. No fuel in the tank	Add Fuel
		2. Filter gauge is clogged	Clean
		3. Fuel tank has a hole	Clean

Engine Lacks Power:

PROBLEM	CAUSE	SOLUTION
Good Compression Ratio	1. Filter is clogged	Clean
	2. Air passes through the connection of carburetor	Tighten
	3. Engine overheats	Stop Engine. Let Cool.
	4. Water in the fuel	Replace Fuel
	5. Dirt clogs the muffler	Clean
Engine Overheats	1. Gas is thin in fuel mix	Replace Fuel
	2. Cylinder is dirty	Clean
	3. Oil is bad	Replace Fuel with New 50:1 Pre Mix Fuel
	4. No connection with hose	Adjust hose connection
Engine is noisy or knocking	1. Fuel bad Replace fuel	Replace Fuel
	2. Dirt in cylinder	Clean
	3. Parts are worn	Fix or Replace

Engine stops while running:

PROBLEM	CAUSE	SOLUTION
Engine stops suddenly	1. Wire of plug is loose	Replace
	2. Piston is broken	Fix or Replace
	3. Plug is dirty	Clean
	4. Fuel is empty	Add Fuel
The engine stops slowly	1. Carburetor is dirty	Clean
	2. Hoses to tank are clogged	Clean
	3. Water in the fuel	Replace Fuel

Engine is difficult to stop:

PROBLEM	CAUSE	SOLUTION
The engine still runs with the throttle at its lowest position	1. The throttle cord has short circuited or carburetor piston is blocked.	Fix or Replace Cord

Difficulties dusting:

PROBLEM	CAUSE	SOLUTION
No dust discharge or discharge is intermittent	1. The dust gate cannot be opened	Adjust
	2. The tank lid not is tight	Tighten
	3. The dust or granule is dirty	Clean
	4. The dust/granule has lumps	Break lumps or replace
	5. The granules are too big	Use smaller granule
The dust gate does not work properly	1. Carburetor is dirty	Clean
	2. Hoses to tank are clogged	Clean
Dust leakage	1. The clamp plate of the chemical tank bottom is loose	Tighten
	2. The sealing gasket of the dusting lid is damaged	Replace
	3. The O ring of the elbow is damaged	Replace
The discharge rate is out of control	1. The dust control lever is not work properly	Adjust the cord or fix the carburetor.

Difficulties fogging:

PROBLEM	CAUSE	SOLUTION
No mist or mist is irregular	1. Nozzle switch or control valve is clogged	Clean
	2. Liquid lead pipe is clogged	Clean
	3. No pressure or low pressure	Tighten the tank lid and screw down the two wing nuts.
Spray mixture leak	1. The lid is placed incorrectly	Tighten correctly
	2. Thread joints are loose	Tighten correctly

CARDINAL

CMD65: Turbo Boost Assembly Pt. 1

Boost Kit Not Included



1 Remove all parts from your mistblower box. You will not need all parts for assembly.



2 Locate the brackets attached to the back padding



3 Remove the brackets from the top left and right corners of the padding



4 Remove padding as shown above



5 Remove the black tube from the blower housing



6 Pull the black valve from out of the chemical tank

CARDINAL

CMD65: Turbo Boost Assembly Pt. 2

www.cardinal-sprayers.com



7 Disconnect the tube from the black valve
(You will need these pieces later)



TIP: Strike the bottom of the tank with your palm to loosen from housing

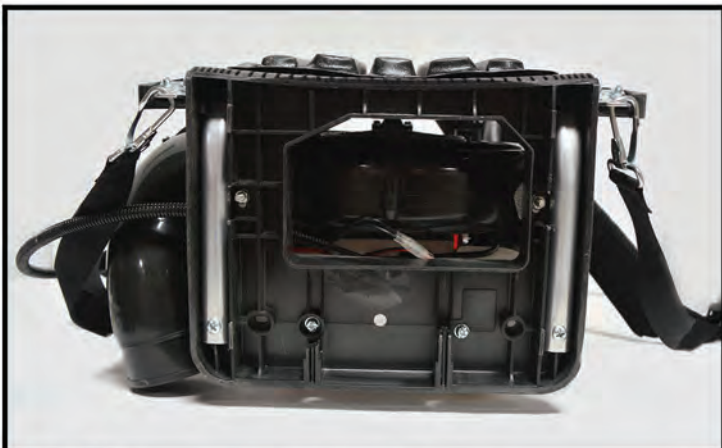
8 Remove the chemical tank from the housing



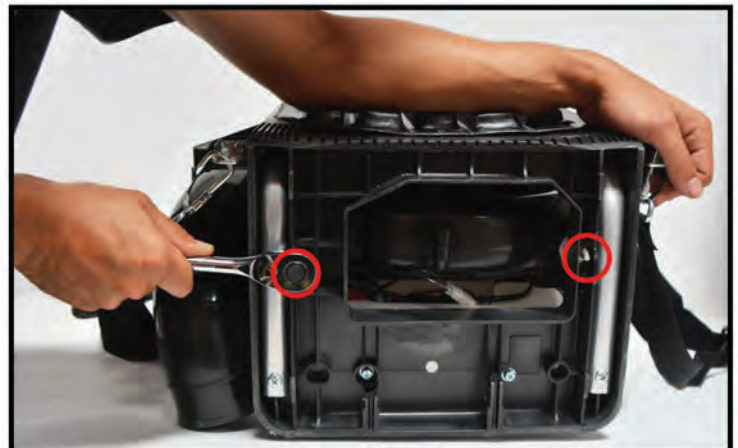
9 Using an allen wrench, loosen the back plate bolt and washer



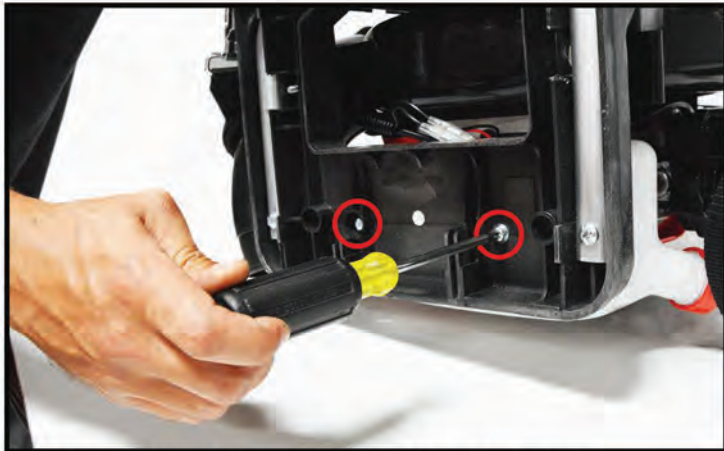
10 Remove the bolt and washer
(You will need these pieces later)



11 Lay the unit down on its engine



12 Remove the top 2 bolts
(You will need these pieces later)



13 Next, remove the bottom 2 screws
(You will need these pieces later)



14 Pull the unit backing off the blower housing



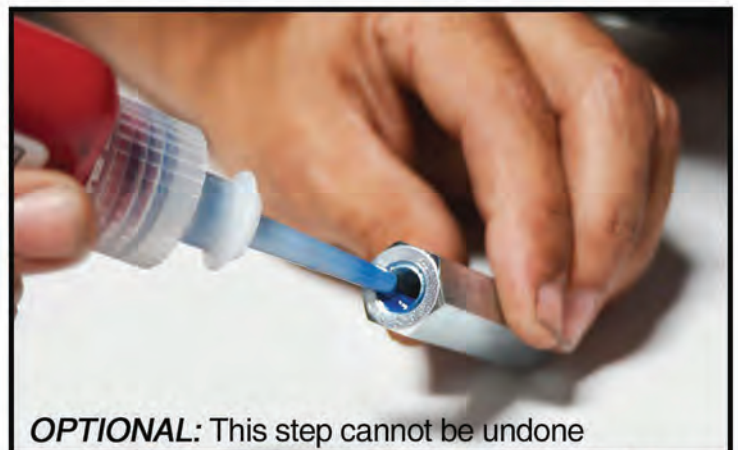
15 Remove the fan guard from the blower housing



16 Remove the nut and washer from the back of the blower housing



17 Remove the nut and washer from the back of the blower housing



OPTIONAL: This step cannot be undone

18 Use a sealant on the aluminum shaft for a tight fit



19 Place the aluminum shaft in the back of the blower housing



20 Tighten the aluminum shaft



OPTIONAL: This step cannot be undone

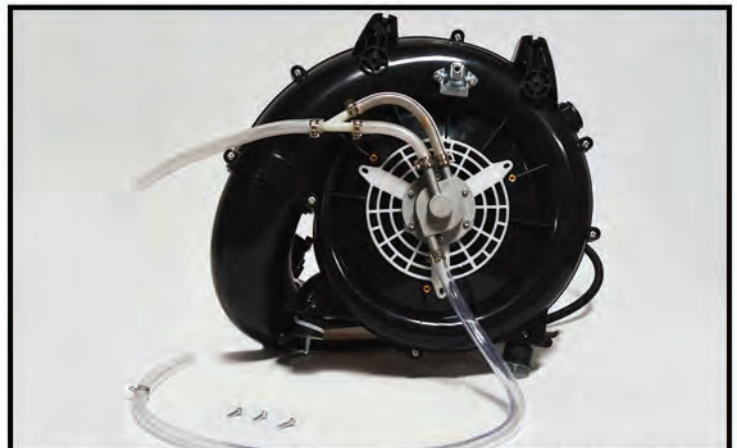
21 Use a sealant around the inside of the plastic coupling for a tight fit



22 Place the plastic coupling onto the aluminum shaft



23 Fit the booster pump onto the plastic coupling



24 The booster pump tubes should be facing left, similar to the image above



25 Fasten the booster pump to the blower housing



26 Place the blower housing back on the back and base



27 The booster pump tubes should hang to the left of the backpack straps



28 Reattach the back plate using the bolt and washer



29 Tighten the bolt with an allen wrench

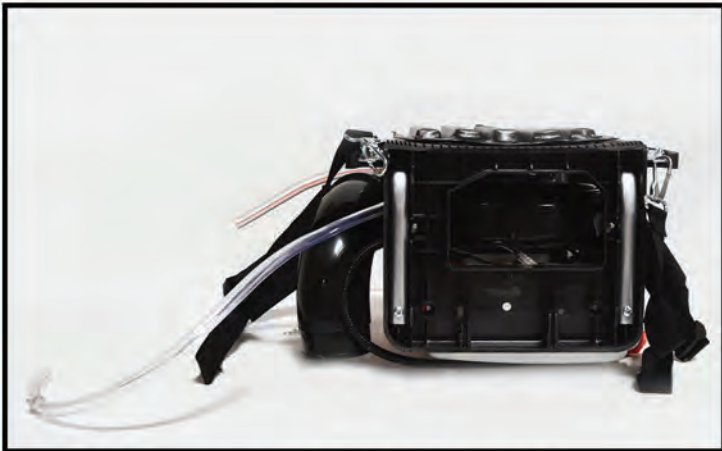


30 Snap the padding brackets back into place

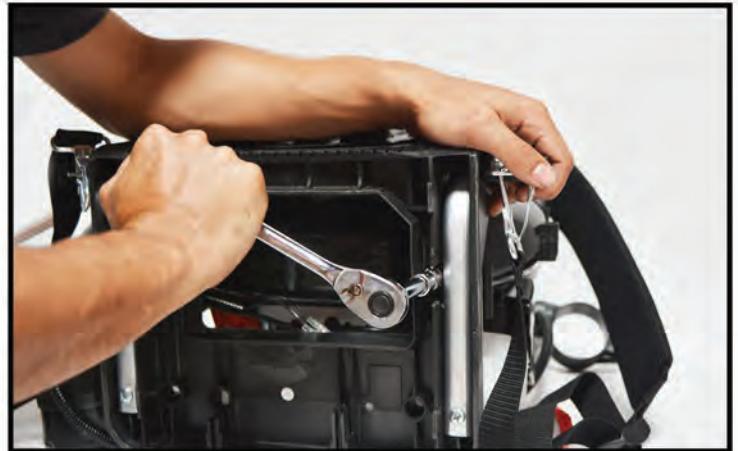
CARDINAL

CMD65: Turbo Boost Assembly Pt. 6

www.cardinal-sprayers.com



31 Place the unit back on its engine



32 Tighten the base using the bolts from Step 12



33 Next, tighten the bottom screws from Step 13



34 Reattach the chemical tank



35 Find the chemical tank's tube and black valve



36 Reattach the tube to the black valve

CARDINAL

CMD65: Turbo Boost Assembly Pt. 7

Boost Kit Not Included



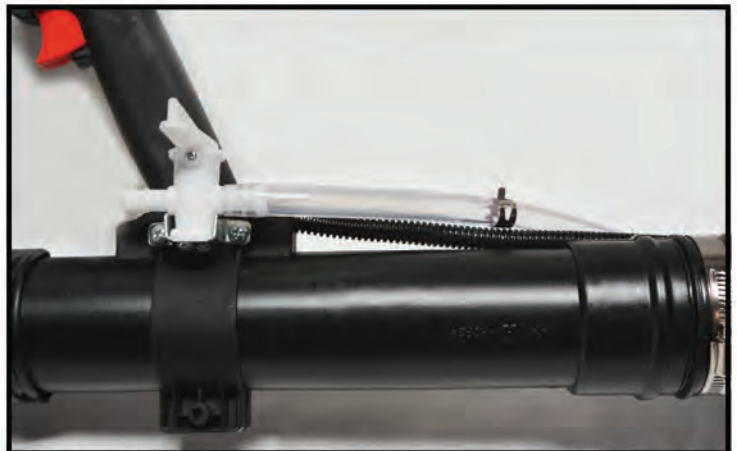
37 Reattach the black tube to the blower housing



38 Attach the shorter tube from the turbo boost to the base of the chemical tank



39 Locate the longer booster pump tube near the base of the unit



40 Attach the booster pump to the back of the throttle & the 2nd tube to the other side



41 Wrap the 2nd tube around the blower pipe (C) and attach its end to the fan nozzle (D)



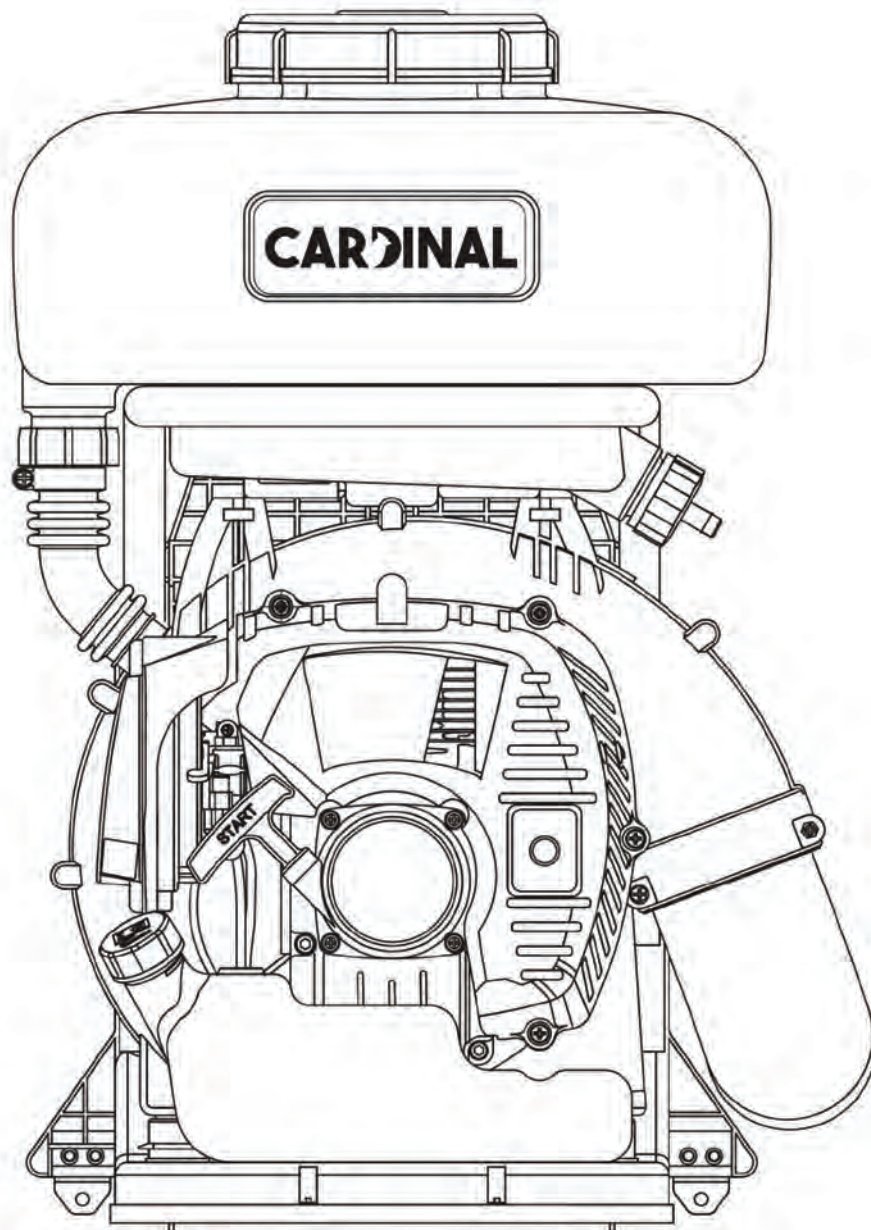
42 To begin fogging, add 50:1 Pre Mix Fuel (Fuel Not Included)

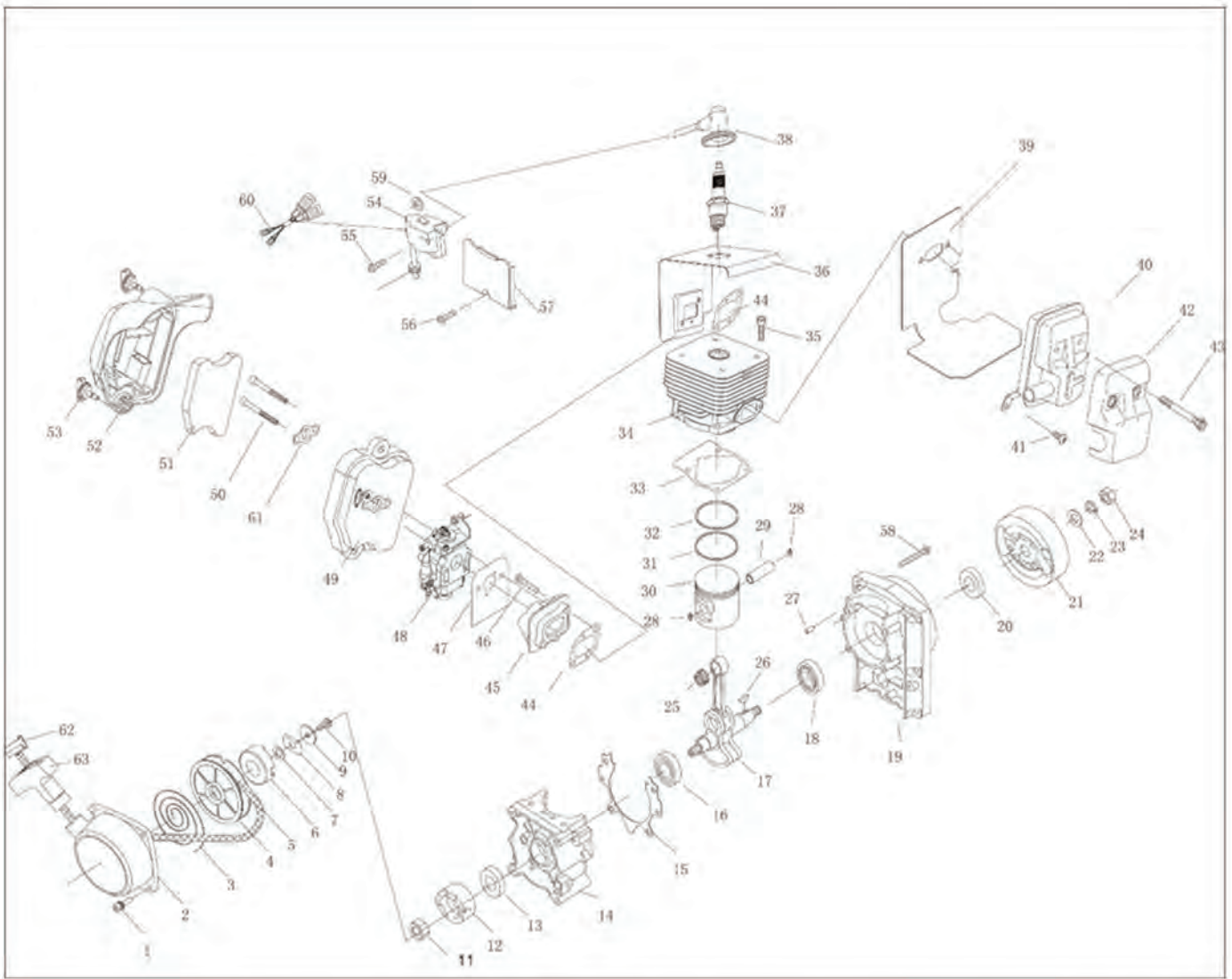
IMPORTANT: Before spraying with chemicals, fill the tank with water to make sure the fogger is operating correctly

CARDINAL

CMD65
BACKPACK FOGGER

Parts List

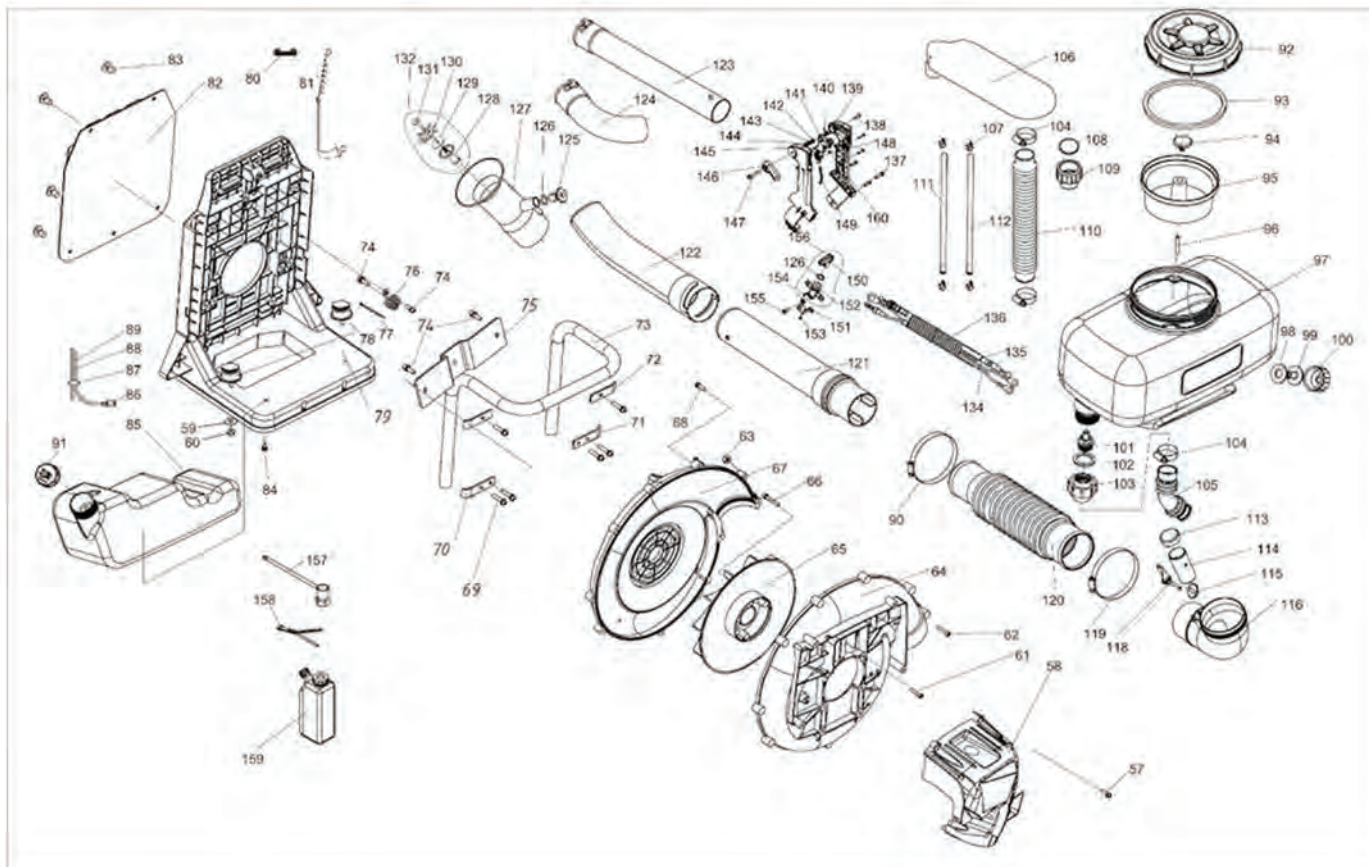




NO.	Part NO.	Part Name	Qty.
1	GB/T70.1+GB93+GB97	Screw M5X18	4
2	1E40FP-3Z.4-1	Case	1
3	1E40FP-3Z.4-7	Spring	1
4	1E40FP-3Z.4-6	Pulley	1
5	1E40FP-3Z.4-9	Rope	1
6	1E40FP-3Z.4-8	Start Wheel	1
7	GB860 8	Washer	1
8	1E40FP-3Z.4-5	Guide Slice	1
9	1E40FP-3Z.4-4	Washer	1
10	GB67 M5X12	Screw	1
11	GB6170 M8	Nut	1
12	3WF-960.1-2	Ratchet	1
13	1E36F.2	Oil-Seal	2
14	1E40F-E.6-2	Crank Case	1
15	1E40F-5.8-4	Gasket	1

NO.	Part NO.	Part Name	Qty.
16	GB/T276	Bearing 6202/P6	1
17	EB-500-E.1.2.1	Crank Shaft	1
18	GB/T276	Bearing 6202/P6	1
19	EB-500-E.1.3-1	Crank Case	1
20	1E40F-5.9	Oil-Seal	1
21	1E46FP.1.1	Fly Wheel	1
22	GB96 8	Washer	1
23	GB96 8	Washer	1
24	GB6170 M8	Nut	1
25	1E44F-2A.2-3	Bearing	1
26	GB1099	Key 3X5X13	1
27	GB119	4H8×10	1
28	P40.6-4	Ring	2
29	1E44F-2A.2-2	Piston Pin	1
30	1E44F-E.3-1	Piston	1
31	1E44F-2A.2-4	Piston Ring	1
32	1E44F-2A.2-4	Piston Ring	1
33	1E40F-5-6	Gasket	1
34	EB-500-E.1-2	Cylinder	1
35	GB70.1	Screw M5X20	4
36	EB-500-E.1-1	Mantle	1
37	RCJ6Y	Spark Plug	1
38	1E46FP.1-1	Plug Cap Ass.	1
39	EB-500-E.1-4	Gasket	1
40	EB-500-E.1.1	Muffler	1
41	GB/T70.1+GB93+GB97	Screw M5×12	1
42	EB-500-E.1-3	Muffler Shield	2
43	GB70.1+GB97	Screw M6×60-12.9	2
44	1E40F-5-2	Gasket	2
45	1E44F-E-PBJ.7	Admitting Pipe	1
46	GB70.1 5*25	Screw	2
47	EB-500-E.1-5	Gasket	1
48	1E48FP-E.4	Carburetor	1
49	EB-500-E.1.6.1	Cleaner Inside Cover	1
50	GB70.1+GB93+GB97	Screw M5×55	2
51	EB-500-E.1.6-3	Filter Net	1
52	EB-500-E.1.6-1	Cleaner Outside Cover	1
53	1E34F.1.2A	Screw	2
54	1E46FP.1.1	Ignition Coil Comp.	1
55	GB/T9074.13 M4X20	Bolt	2
56	GB/T9074.4 M5X20	Bolt	1
57	1E46FP-2	Shield	1
58	GB70.1	Screw M5×30	4

NO.	Part NO.	Part Name	Qty.
59	P40-5	Washer	2
60	EB-500-E.1-6	Parking	1
61	P40.1-3	Baffle	1
62	1E40FP-3Z.4-10	Cover	1
63	1E40FP-3Z.4-3	Cover	1
64	1E40FP-3Z.4-2	Handle	1



NO.	Part NO.	Part Name	Qty.
57	3WF-20.9-2	Screw	4
58	EB-500-E-4	Protection	1
59	GB/T96	Washer 6	2
60	GB/T6177	Nut M6	2
61	GB70+GB93+GB97	Screw M6×30	6
62	GB/T818	Screw M5×70	2
63	GB/T6170	M5 Nut	2
64	EB-500-E.2-1	Volute Case	1
65	EB-500-E.2.3	Impeller	1
66	GB70+GB93+GB97	Screw	4
67	EB-500-E.2-2	Volute Case	1
68	XSS46-2.2-5	Screw	10
69	GB70+GB93+GB97	Screw	6
72	3WF-14-9	Board	2
73	3WF-14B-4A	Support	1

NO.	Part NO.	Part Name	Qty.
74	GB70+GB93+GB97	Screw	4
75	3WF-14B-3	Board	3
76	3WF-14-12	Spring	1
77	250*4.5	Line	1
78	3F-30.17	Rubber Pillar	2
79	3WF-14-7	Frame	1
80	EB-650-10	Axis	2
81	EB-650.10	Gallus	2
82	3WF-14.7	Mat	1
83	3WF-2.6B-2	Plastic Clip	5
84	GB/T9074.4 M6×12	Screw	2
85	EB-500-E.4-1	Gasoline Tank	1
86	1E34F.9.2-3D	Filter	1
87	EB-415.4.2-2	Stopper	1
88	EB-415.4.2-4	Tube(180Mm)	1
89	CG420.1.3.2-2	Tube(350Mm)	1
90	GB/T 8870	Hoopø59-ø82	1
91	1E32FL.6.2	Lid	1
92	3WF-8.1-2A	Lid	1
93	3WF-8.1-1	Sealing Washer	1
94	3WF-14.3-1	Air Valve	1
95	3WF-14.3-3	Filter	1
96	GB/T13527.1 8×1.5×500	Tube	1
97	3WF-14B.2-1	Chemical Tank	1
98	3WF-3A.1-2	Sealing Washer	1
99	3WF-3A.1-1	Link Pipe	1
100	3WF-3A.1-3	Connector Lid	1
101	3W-16.4-2	Connector	1
102	3W-16.4-3	Sealing Washer	1
103	3W-16.4-1	Connector Lid	1
104	JB/T8870	Hoopø25-ø40	3
105	3WF-14B-5	Connector	1
106	3WF-16.2-1	Tube	1
107	3WF-3-3	Tube	4
108	3WF-950.2.1-2	Loop	1
109	3WF-950.2.1-1	Connector Lid	1
110	3WF-16.2-3	Tube	1
111	GB/T13527.1 10×1.5×830	Tube	1
112	GB/T13527.1 10×1.5×880	Tube	1
113	3WF-16.3-1	Plug	1
114	3WF-950.1.1-1	Tube	1
115	3WF-16.3.1-3	Board	1
116	3WF-14B.1.1-1	Elbow	1

NO.	Part NO.	Part Name	Qty.
118	3WF-16.3.1-2A	Switch	1
119	GB/T 8870	Hoop ϕ 78- ϕ 102	1
120	3WF-3.19-4	Tube	1
121	3WF-2.6.4.1	Connector	1
122	3WF-2.6.4-2	Tube	1
123	3WF-2.6.4-4	Tube	1
124	3WF-2.6.4-3	Tube	1
125	3WF-3.19.3-3	Valve	1
126	GB1235 16 \times 2.4	Sealing Washer	1
127	3WF-2.6.4.3-1	Nozzle	1
128	3WF-2.6.4.3.1.1	Nozzle	1
129	3WF-2.6.4.3.1-1	Washer	1
130	3WF-2.6.4.3.1-3	Rotation Impeller	1
131	3WF-2.6.4.3.1-2	Seat	1
132	3WF-2.6.4.3.1	Nozzle	1
133			
134	3W-15A-3	Line	1
135	3WF-14B.3.1.1	Line	1
136	CG328.1.1-4	Tube	1
137	GB/T 845	St5.5*25 Screw	1
138	GB/T 845	St4.2*19 Screw	5
139	3WF-14.5.1-2	Handgrip	1
140	3WF-14.5.1-7	Spring	1
141	3WF-14.5.1-3	Handgrip	1
142	GB/T6172.2	M6 Nut	1
143	3WF-14.5.1-8	Washer	1
144	GB/T955	Washer	1
145	3WF-14.5.1-1	Handgrip	1
146	3WF-14.5.1-10	Handgrip	1
147	3WF-14.5.1-9	Screw	1
148	3WF-14.5.1-5	Switch	1
149	3WF-14.5.1-4	Patch	1
150	3WF-3.19.1-1	Core	1
151	3WF-14.5.1.2-1	Seat	1
152	3WF-3.19.1-2	Shell	1
153	GB/T 845	St4.2X8 Screw	1
154	GB/T828	M3X5X2.5 Screw	2
155	GB/T845	St4.8*13 Screw	1
156	3WF-3.19.1	Cock Assem(No Board)	1
157	3WZ-4.15.1	Spanner	1
158	3WF-3.25.4	Chain	1
159	ZB4-10.1	Oil Bottle	1
160	3WF-14.5.1-6	Sheath	1

CALIFORNIA AND FEDERAL EMISSION CONTROL WARRANTY STATEMENT

YOUR WARRANTY RIGHTS AND OBLIGATIONS

The California Air Resources Board, the United States Environmental Protection Agency and CARDINAL are pleased to explain the emissions control system warranty on your 2018-2019 small engine/equipment (SORE). In the United States and California, new small engine/equipment must be designed, built and equipped to meet the State's stringent anti-smog standards. CARDINAL must warrant the emissions control system on your small engine/equipment for the periods of time listed below provided there has been no abuse, neglect or improper maintenance of your small engine/equipment.

Your emission control system may include parts such as the carburetor, fuel-injection system, the ignition system, catalytic convertor, fuel tanks, fuel lines, fuel caps, valves, canisters, filters, vapor hoses, belts, clamps, connectors, and other associated emission-related components. For engines less than or equal to 80 cc, only the fuel tank is subject to the evaporative emission control warranty requirements of this section.
(California only)

Where a warrantable condition exists, CARDINAL will repair your small off-road engine/equipment at no cost to you including diagnosis, parts and labor.

MANUFACTURER'S WARRANTY COVERAGE:

The emissions control system is warranted for two years. If any emissions-related part on your small engine/equipment is defective, the part will be repaired or replaced by CARDINAL.

OWNER'S WARRANTY RESPONSIBILITIES:

As the small engine/equipment owner, you are responsible for the performance of the required maintenance listed in your owner's manual. CARDINAL recommends that you retain all receipts covering maintenance on your small engine/equipment, but CARDINAL cannot deny warranty solely for the lack of receipts or for your failure to ensure the performance of all scheduled maintenance.

As the small engine/equipment owner, you should however be aware that CARDINAL may deny your warranty coverage if your small engine/equipment or a part has failed due to abuse, neglect, improper maintenance or unapproved modifications.

You are responsible for presenting your small engine/equipment to distribution center or service center authorized by CARDINAL as soon as the problem exists. The warranty repairs should be completed in a reasonable amount of time, not to exceed 30 days.

If you have any questions regarding your warranty rights and responsibilities, you should contact CARDINAL customer service representative at 1-866-577-4476.

DEFECTS WARRANTY REQUIREMENTS

(a)The warranty period begins on the date the small engine/equipment is delivered to an ultimate purchaser.

(b)General Emissions Warranty Coverage. CARDINAL warrants to the ultimate purchaser and each subsequent owner that the engine/equipment is:

(1) Designed, built, and equipped so as to conform with all applicable regulations adopted by the Air Resources Board; and

(2) Free from defects in materials and workmanship that causes the failure of a warranted part for a period of two years.

(c)Subject to certain conditions and exclusions as stated below, the warranty on emissions related parts is as follows:

(1)Any warranted part that is not scheduled for replacement as required maintenance in your **Owner's Manual** is warranted for the warranty period stated above. If the part fails during the period of warranty coverage, the part will be repaired or replaced by CARDINAL according to Subsection (4) below. Any such part repaired or replaced under warranty will be warranted for the remainder of the period.

(2)Any warranted part that is scheduled only for regular inspection in your **Owner's Manual** is warranted for the warranty period stated above. Any such part repaired or replaced under warranty will be warranted for the remaining warranty period.

(3)Any warranted part that is scheduled for replacement as required maintenance in your **Owner's Manual** is warranted for the period of time before the first scheduled replacement date for that part. If the part fails before the first scheduled replacement, the part will be repaired or replaced by CARDINAL according to Subsection (4) below. Any such part repaired or replaced under warranty will be warranted for the remainder of the period prior to the first scheduled replacement point for the part.

(4)Repair or replacement of any warranted part under the warranty provisions herein must be performed at a warranty station at no charge to the owner.

(5)Notwithstanding the provisions herein, warranty services or repair will be provided at all of our distribution centers that are franchised to service the subject small engine/equipment.

(6)The small engine/equipment owner must not be charged for diagnostic labor that leads to the determination that a warranted part is in fact defective, provided that such diagnostic work is performed at a warranty station.

(7)CARDINAL is liable for damages to other small engine/equipment components proximately caused by a failure under warranty of any warranted part.

(8)Throughout the small engine/equipment warranty period stated above, CARDINAL will maintain a supply of warranted parts sufficient to meet the expected demand for such parts.

(9)Any replacement part may be used in the performance of any warranty maintenance or repairs and must be provided without charge to the owner. Such use will not reduce the warranty obligations of CARDINAL

(10) Add-on or modified parts that are not exempted by the Air Resources Board may not be used. The use of any non-exempted add-on or modified parts by the ultimate purchaser will be grounds for disallowing a warranty claim. CARDINAL will not be liable to warrant failures of warranted parts caused by the use of a non-exempted add-on or modified part.

(11) The manufacturer issuing the warranty shall provide any documents that describe that manufacturer's warranty procedures or policies within five working days of request by the Air Resources Board.

EMISSION WARRANTY PARTS LIST

The repair or replacement of any warranted part otherwise eligible for warranty coverage may be excluded from such warranty coverage if CARDINAL demonstrates that the small engine/equipment has been abused, neglected, or improperly maintained, and that such abuse, neglect, or improper maintenance was the direct cause of the need for repair or replacement of the part. That notwithstanding, any adjustment of a component that has a factory installed, and properly operating, adjustment limiting device is still eligible for warranty coverage. The following emissions warranty parts for each engine family list is covered.

For engine families greater than 80cc:

(1) Fuel Metering System:

- (a) Gasoline carburetor assembly and its internal components
- (b) Carburetor gaskets
- (c) Fuel tank
- (d) Fuel Line
- (e) Fuel Line Fittings
- (f) Clamps
- (g) Pressure regulator (if equipped)
- (h) Mixer assembly and its internal components (if equipped)

(2) Air Induction System including:

- (a) Intake pipe/manifold
- (b) Air cleaner

(3) Ignition System including:

- (a) Spark plug
- (b) Ignition coil

(4) Catalytic Muffler Assembly including:

- (a) Muffler gasket
- (b) Exhaust manifold
- (c) Catalytic converter

(5) Crankcase Breather Assembly including:

- (a) Breather connection tube.

(6) Fuel tank evaporative emissions control system including:

- (a) Purge Valves
- (b) Carbon Canister
- (c) Canister Mounting Brackets
- (d) Fuel Cap
- (e) Fuel Tank

(7) Miscellaneous items Used in Above Systems including:

- (a) Switches
- (b) Hoses, belts, connectors, and assemblies.

(8) Air injection system

(a) Pulse valve

For engine families less than or equal to 80cc:

(1) Fuel Metering System:

(a) Gasoline carburetor assembly and its internal components

(b) Fuel filter (if so equipped)

(c) Carburetor gaskets

(d) Fuel pump (if so equipped)

(2) Air Induction System including:

(a) Intake pipe/manifold

(b) Air cleaner

(3) Ignition System including:

(a) Spark plug

(b) Ignition module/coil

(4) Catalytic Muffler Assembly (if so equipped) including:

(a) Muffler gasket

(b) Exhaust manifold

(5) Crankcase Breather Assembly including:

(a) Breather connection tube.

(6) Miscellaneous items Used in Above Systems including:

(a) Switches

(b) Hoses, belts, connectors, and assemblies.

(7) Fuel tank evaporative emissions control system including:

(a) Fuel Tank

The warranty is provided in accordance with the "California AND FEDERAL Emission Control Warranty Statement".



Power Your World

Cardinal understands to keep a job-site running smoothly the proper equipment and spare parts are needed at the drop of a hat. With same day shipping and faster delivery times, count on Cardinal to keep you powered throughout the day! With long lasting parts and engines, Cardinal equipment will be the star of your tool shed for years to come.

CARDINAL

A Tomahawk Power, LLC Brand
San Diego, CA

Sales and Service
(866) 577-4476
sales@tomahawk-power.com

www.tomahawk-power.com

TOMAHAWK

