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FOREWORD

Paxton supercharger kit expressly designed for the 2000-2001 4.7L Dodge Durango. Contact Paxton Automotive Corporation for any additional information regarding this kit and any of these modifications at (805) 604-1336 7:00am-3:30pm PST. An understanding of the information contained herein will help novices, as well as experienced technicians, to correctly install and receive the greatest possible benefit from their Paxton supercharger. When reference is made in this manual to a brand name, number, specific tool or technique, an equivalent product may be used in place of the item mentioned. All information, illustrations and specifications contained herein are based on the latest product information available at the time of this publication. All rights reserved to make changes at any time without notice.



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TABLE OF CONTENTS

FO	REWORD	ii
TA	BLE OF C	ONTENTSiii
IM	PORTANT	NOTESiv
RE	COMMEN	DED TOOLS
PA	RTS LIST	
1.0	INTRODU	JCTION
2.0	INITIAL I	PREPARATION AND DISASSEMBLY
3.0	SUPERCI	HARGER INSTALLATION AND ASSEMBLY
4.0	FINAL CI	HECK-OUT AND START-UP4-1
AP	PENDIX:	
	#1201216	KIT, PARTS LIST
	#1016416	ASY, S/C NOVI 1000
	#1016623	ASY, S/C MOUNTING BRACKET
	#1015934	ASY, AIR INTAKE
	#1017416	ASY, BELT TENSIONER
	#1019342	ASY, OIL FEED
	#1019343	ASY, OIL DRAIN
	#1020116	KIT, AIR DISCHARGE
	#1020217	KIT, HEATER HOSE RELOCATION
	#1015511	ASY, COMPRESSOR BYPASS
	#1020216	ASY, CRUISE CONTROL RELOCATION
	#1017718	ASY, FUEL CONTROL
	#1020218	ASY, WASHER HOSE MODIFICATION

RECOMMENDED TOOLS FOR INSTALLATION:

- **1.** Metric and Standard sockets sets
- **2.** Metric and Standard combination wrenches
- **3.** Phillips and common screw drivers
- **4.** 12" crescent wrench or 36mm open end wrenches
- 5. Pliers
- 6. Wire cutters and wire crimping Tool
- 7. Hose cutters
- 8. 1/8" drill bit and hand drill
- 9. Allen wrenches
- 10. Small heat source
- 11. 3/8 Tap NPT

Section 1

ongratulations! You have purchased the finest street Supercharger available for the 2000-2001 4.7L Dodge Durango. The centerpiece of this kit is the highly efficient and reliable Paxton Automotive Corp. NOVI-1000 supercharger. A mechanically driven (by belt) centrifugal blower (supercharger).

This kit comes with all of the parts you'll need for a successful installation. The operations required have been grouped in order of sequence. Photos and drawings accompany the text, allowing quick orientation and parts identification.

Installation requires a selection of tools which are listed in a table at the end of this section.

We also suggest that you obtain a Dodge shop manual and become familiar with the details of your cars systems. Manuals may be obtained from your local Dodge dealer or you can order one from Helm publications at (800) 782-4356.

For best results follow the instructions closely and in sequence. The average installation time for this kit is 8-10 hours. Your actual installation time will depend on skill level and working conditions. The estimate does not include time for initial vehicle inspection, cleaning, fine tuning or troubleshooting. Before even picking up a wrench, read this entire manual. We are available for technical assistance at (805) 604-1336, 7am-3:30pm pacific time.

After reading the manual, verify that all major assembly groups are present in the main kit box. You should have ample space to layout the components. As you remove a box or bag from the main kit, note the identification label and compare it with the parts list. Please check the box for small parts.

Paxton makes every effort to insure that all parts are included in the box. However, if you discover any missing or mislabeled parts, please contact Paxton by phone for service.

*****WARNING****

DO NOT attempt installation if any part(s) are missing from this kit. Failure to contact Paxton prior to beginning

installation will result in a charge for any missing parts.

Before starting the installation, we suggest your engine compartment be clean. You can clean the engine and compartment with a pressure washer (such as those used at self serve car washes) and a safe-for-aluminum cleaner/degreaser. Cover the distributor with a plastic bag to prevent water from entering.

*****CAUTION****

We do not recommend proceeding with the kit installation unless your vehicle is within normal operating parameters.

You are undoubtedly enthusiastic about getting started on your project, but take just a little more time to insure that your safety is not jeopardized. A moment's lack of attention can result in an accident, as can failure to observe certain simple safety precautions. The possibility of an accident will always exist, and the following points should not be considered a comprehensive list of all dangers. Rather, they are intended to make you aware of the risk and to encourage a safety conscious approach to all work you do on your vehicle.

We look forward to hearing from you, particularly if you have any comments or suggestions regarding this manual at (805) 604-1336

Paxton Automotive Corporation 1300 Beacon Place Oxnard, CA 93033 E-mail Address info@paxtonauto.com.

***** NOTE *****

Throughout these procedures the word "discard" is used periodically in relationship to items that will no longer be utilized in conjunction with the supercharger installation. It is recommended that these items be saved for future use should it become necessary.

- Never rely solely on a jack when working under a vehicle. Always use an approved set of jackstands to support the vehicle and place them under the recommended lift points.
- When jacking a vehicle, make sure it is on a level surface, preferably concrete or asphalt. The transmission should be in "PARK" or "FIRST", the parking brake engaged and the wheels blocked.
- Never start the car without first verifying that the transmission is in neutral and the parking brake is set.
- Never remove the radiator cap while the engine is hot.
- Always wear eye protection when using power tools such as drills, saws, grinders, etc., or when working under a vehicle.
- Never smoke, use an open flame, or have spark-producing items around gasoline or flammable solvents. Always have a fire extinguisher rated for chemical and electrical fires handy when working on motor vehicles.
- Run engines only in well ventilated areas. Carbon monoxide, gasoline, and solvent vapors are colorless and sometimes odorless. These can asphyxiate or explode without warning.
- Always disconnect at least the negative (-) or ground terminal of the battery when doing any electrical, fuel system, or underdash work.

Paxton Automotive makes every effort to insure that all parts are included in the box, but mistakes do occur. If you discover that you are missing any part, or that a part is damaged in transit, please call Paxton Automotive for service. DO NOT attempt installation if any part(s) are missing from this kit. Failure to contact Paxton prior to beginning installation will result in a charge for any missing parts.

We look forward to hearing from you, particularly if you have any comments or suggestions regarding this manual.

Section 2

INITIAL PREPARATION AND DISASSEMBLY

egin the initial preparation and disassembly process by disconnecting the battery cables.

2.1 FAN AND FAN SHROUD REMOVAL

- **a.** Remove the plastic panel under the front of the vehicle by prying out the seven plastic clips. Drain the radiator.
- b. Remove the upper fan shroud/reservoir by first disconnecting the three electrical plugs and two small hoses on the passenger side. (See *Fig 2.1.*)



Fig. 2-1

c. Disconnect the coolant overflow hose at the filler cap. (See Fig. 2-2.) Make sure to clamp or plug this hose to avoid coollant loss. Remove the two bolts securing the shroud using a 10mm socket. Lift up and remove shroud.



Fig. 2-2

d. Remove the fan using a 36mm or a large crescent wrench. Hitting the wrench with a brass hammer will break it loose. The fan unscrews counter-clockwise as viewed from the front of the engine. (See *Fig. 2-3*.)



Fig. 2-3

2.2 AIR FILTER REMOVAL

e. Remove the air filter assembly (See *Fig. 2-4*). by first loosening the clamp at the throttle body, then disconnect the "S" shaped pcv hose. (See *Fig. 2-5*.) Remove the nut securing rear of air box using a 10mm socket. Lift assembly up and off the rubber mounts.



Fig. 2-4



Fig. 2-5

- **f.** Remove both metal coolant lines and their mounts that run across the top of the engine.
- g. On the passenger side of the engine, remove the uppermost hose fitting that was connected to the coolant hose using a 3/4" wrench.
- h. Using Teflon sealant, install the supplied 45 deg. brass fitting so it points back and up slightly. Thread the straight hose fitting into this using Teflon sealant. (See *Figs. 2-6*, 2-7.)



Fig. 2-6



Fig. 2-7

i. Attach the supplied coolant hoses being careful to get the orientation correct. If necessary, hold the original metal lines in place to see which hose goes with what fitting. Re-use the factory spring type clamps removed from both ends of the original metal lines at the splice point. (See *Fig. 2-8*.)



Fig. 2-8

j. Detach wiring harness from the front of the engine. (See *Fig. 2-9*.)



Fig. 2-9

- **k.** Remove the fan belt by rotating the tensioner using a 15mm wrench or socket.
- **l.** Remove the four bolts securing the oil filler neck using a 10mm deep socket. (See *Fig. 2-10*.)



Fig. 2-10

- **m.** Remove the three bolts securing the A/C compressor using a 13mm and 15mm socket. Lift compressor up and let it rest on top of the valve cover.
- using a 1-1/8" wrench or socket, remove the large bolt on the front of the cylinder head. (See *Fig. 2-11*.)



Fig. 2-11

filler by cutting it off just before the second barb (approx 3/4"). Do not remove the second barb as this keeps the hose from coming off under boost. (See *Fig. 2-12*.) Install the supplied longer hose.

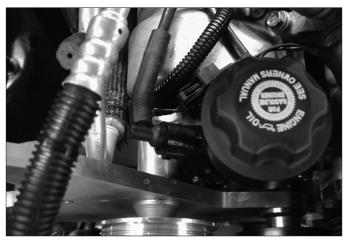


Fig. 2-12

p. Detach the cruise control cable at the throttle body. (See *Fig. 2-13*.) Using a 10mm socket, unbolt the cruise control actuator and seperate it from its mounting bracket.



Fig. 2-13

q. Once you have removed the two 10mm nuts securing the cable to the actuator, pull out the small pin using a pair of pliers. (See *Fig.* 2-14)



Fig. 2-14

r. Re-route the cruise control cable behind the A/C lines at the firewall. Unbolt the computer from the inner fender panel using an 8mm socket and route the cruise control cable behind it. (See *Fig. 2-15*.)



Fig. 2-15

s. Re-assemble the actuator onto the new bracket. (See Fig. 2-16.)



Fig. 2-16

- t. Bolt the bracket to the fender panel using the two existing holes next to the large opening. The plug portion should point straight down. Re-attach the cable at the throttle body. Re-attach the computer.
- u. Attach the rear support plate to the cylinder head using the supplied large bolt. (See Figure 2-17) Use at least two of the supplied 6mm bolts to align the bracket with the other mounting holes before tightening. Make sure the supplied O-ring is in place on the rear of the plate.

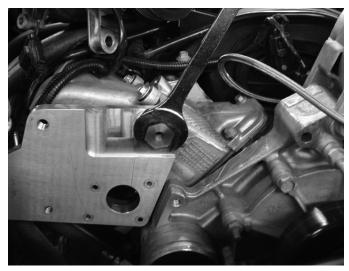


Fig. 2-17

v. Bolt the oil filler neck to the plate using the supplied hardware. (See *Fig. 2-18*.) Reattach the PCV hose.



Fig. 2-18

w. Bolt the A/C Compressor back in place using the original hardware. You may need to bend the A/C line slightly to fit in corner of plate. (See *Fig. 2-19*.)

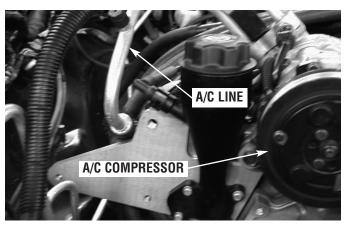


Fig. 2-19

x. Bolt the front plate to the rear plate using a 9/16", 3/4" and a 17mm socket (See *Fig. 2-20*.) Check the tightness of the small idler attached to the plate with a 9/16" socket.



Fig. 2-20

y. Install the new Accessory drive belt. (See Fig. 2-21.) Re-install the fan. (See Fig. 2-22.)



Fig. 2-21



Fig. 2-22

From under the vehicle mark and drill the oil pan in preparation for the oil drain. (See Fig. 2-23.) On the front of the pan, measure and mark the center. Now find the centerpoint between the pan rail. Coat a 3/16" drill bit with grease and drill the hole. Coat the supplied punch with anti-seize or heavy grease and drive it in only halfway using an air chisel with a blunt tip. Do not use a hammer. Do not go in all the way or you will damage internal engine components. Now you must cut off the front portion of the hardened steel punch with either a grinder or a cut off wheel. Continue driving the punch in, and expand the hole until it measures Ø9/16". Go slow with this. It will affect your tapped hole if you go too far. Now tap the hole using a greased 3/8 NPT tap. Go slowly and make sure the tap goes in straight. Stop periodically to clean and regrease the tap. Run the tap in only 2/3 of the way and check to see that the fitting will screw in leaving at least three threads exposed. Clean threads thoroughly, coat fitting with Teflon sealant and install.



Fig. 2-23

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Section 3

SUPERCHARGER INSTALLATION AND ASSEMBLY

3.1 SUPERCHARGER INSTALLATION:

- **a.** Test fit the supercharger in the mounting bracket. You may need to bend the A/C lines for a perfect fit.
- **b.** Measure and cut the supplied oil drain hose to 22-1/2" long. Secure hose to drain fitting on supercharger using supplied clamp. (See *Fig. 3-1*.)

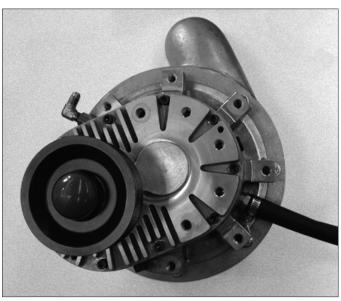


Fig. 3-1

c. Lower the supercharger into place making sure that the oil drain hose goes over the A/C line. (See *Fig. 3-2*.)

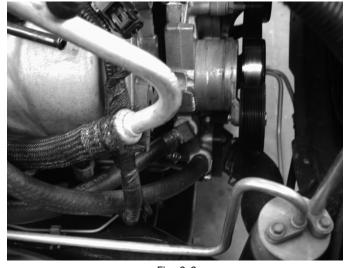


Fig. 3-2

d. Fasten supercharger with 6 bolts and attach drain hose to fitting on pan. (See *Figs. 3-3*, 3-4.)



Fig. 3-3

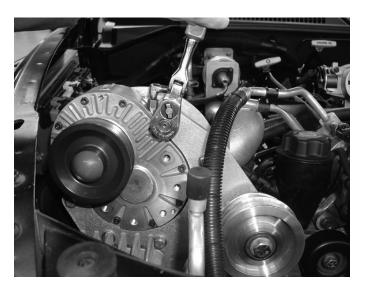


Fig. 3-4

Make sure the drain hose is routed smoothly down hill without dips or kinks. Drain restriction may cause supercharger failure.

e. Bolt the belt tensioner assembly to the front of the supercharger using a 7/32" allen wrench or socket (See *Fig. 3-5*.)

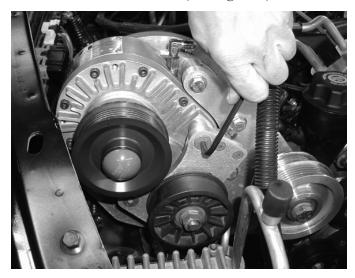


Fig. 3-5

f. Install the supercharger drive belt and tension by turning the leadscrew clockwise using a 10mm socket. The belt should be very tight as it will stretch after being run and loosen up. (See *Fig. 3-6*)



Fig. 3-6

g. Tighten the nut on the tensioner pulley using a 3/4" wrench. You will have to bend the uppermost a/c line up slightly to clear the belt. (See *Fig. 3-7.*) Also, bend it up slightly at the radiator end until it clears.

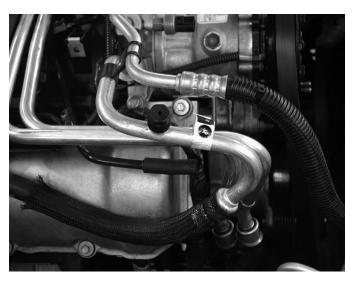


Fig. 3-7

h. Under the vehicle, near the oil filter, you will find the oil pressure sender. Unplug and remove using an oil pressure sender socket available at most auto parts stores. Install the brass TEE fitting using Teflon sealant on the threads. (See *Fig. 3-8.*) The sender is now re-installed pointing toward the front of the vehicle.



Fig. 3-8

- i. Using Teflon sealant, install the straight fitting into the remaining port and attach one end of the oil line using a 9/16" wrench. Route the oil line up and across the top of the engine toward the supercharger.
- **j.** Install the 90 deg. fitting in the supercharger oil jet using Teflon sealant. Support the jet with a 1/2" wrench as you tighten the fitting. Next, route the oil line. (See *Fig. 3-9.*)

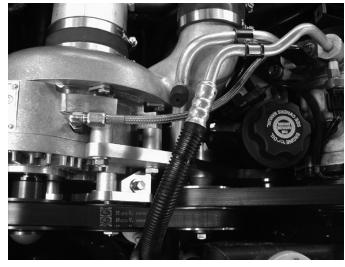


Fig. 3-9

k. Attach the oil line, again supporting the oil jet at the top. (See *Fig. 3-10*.)

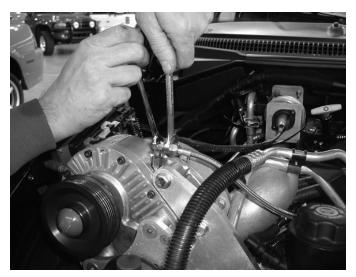


Fig. 3-10

- **l.** Re-install the plastic undertray reusing the seven plastic fasteners.
- m. Locate the fuel pressure test port directly under the dipstick on the passenger side fuel rail. (See *Fig. 3-11*.) Remove the plastic cap and place a rag over the port. Hold the rag with one hand and depress the valve with a small screwdriver to relieve fuel system pressure. Use caution when prforming this step to avoid getting fuel in your eyes. Remove the valve core using a small screwdriver or valve core removal tool.



Fig. 3-11

n. Attach the discharge tube so the injectors are situated under the throttle linkage. (See *Fig. 3-12*.)



Fig. 3-12

o. Attach the straight end of the fuel line to the fuel rail and the 90 deg. end to the injector block. Tighten using a 9/16" wrench. (See *Fig. 3-13.*)



Fig. 3-13

q. Route the red and black wires along with the small four wire harness back and along the firewall, but do not secure. The relay will be mounted to the stud just above and to the side of the brake booster. (See *Figure 3-14*.)



Fig. 3-14

r.) Attach the ground from the relay and the Paxton engine management unit to the same stud. Connect the red wire from the fueler to terminal 87 on the relay. Route the wires from the relay back toward the fuse box. Using the supplied blue shrink type butt connector, splice the green wire into the green wire with the black stripe. (See *Fig. 3-15*.) This will be the trigger for the relay.

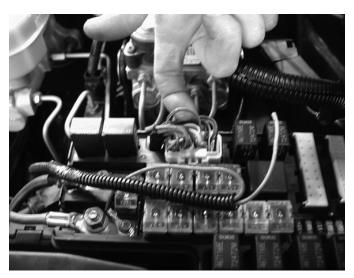


Fig. 3-15

- s. Using a heat gun or lighter, apply heat until the connector shrinks. Attach the red to the main power terminal in the fuse box (large black wire). (See *Fig. 3-16*.) Cover the wires with the black splitloom.
- t. Route the small four wire harness across the firewall to the factory computer.

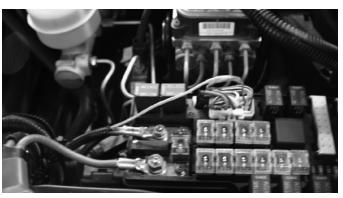


Fig. 3-16

*****DURANGO ONLY****

Engine Management installation, please refer to assembly drawing #1017718. This shows the pin locations and correct connector on the factory ECM. Mount Paxton's Engine Control Unit to the cover of the power distribution box in the engine compartment. Route the 8-wire harness across the firewall of the engine compartment to the factory ECM. Locate the black connector on the ECM and strip back enough of the factory tape and split loom to allow locating the pins and colored wires in the factory harness. Make your cuts in the harmess approximately 2" to 3" from the plug to the ECM. This allows working room to make the connection from the Paxton supplied Engine Management Unit to the factory ECM. (Although Paxton supplies 8 butt connectors in the kit to make the connections between the Engine Control Unit and the ECM we recommend you solder the connection in place of the supplied connectors, assuring a good connection.) If you use the connectors, be sure to carefully crimp them to make a good connection.

- w. Route the injector harness straight across and over the engine. Connect to the two injectors in the discharge tube.
- v. Re-install the fan shroud and re-connect all electrical connections. Install the supplied 90°. rubber elbow on the washer pump discharge port nearest the dual idler pulley. Reconnect the remaining pump as stock. (See *Fig. 3-17*.)



Fig. 3-17

- y. Install the air intake assembly. Connect the "S" shaped hose to the small hose barb. Connect the compressor bypass to the larger hose barb and secure.
- **z.** Refill the radiator with coolant. *Congratulations you are done.*

Section 4

This section covers pre-start checks and inspections, as well as initial start-up.

4.1 INSPECT THE FOLLOWING:

- a. Wires, harnesses and electrical connections. Are all items properly dressed, connected and secured? If any electrical connections have been dis-connected, re-connect them before you start your vehicle.
- **b.** Hoses, lines and fittings. Are all items properly dressed, connected and secured?
- **c.** Fasteners, brackets, and clamps. Are all items properly installed and tightened?
- **d.** Fluid levels. Is the radiator coolant and the engine oil at their proper levels? Are there any fluid leaks?
- e. Belt(s). Is the serpentine drive belt (or accessory drive and supercharger drive belts, depending on the requirement of your vehicle) properly installed, aligned and tensioned?

4.2 Perform the following:

- a. Cycle the ignition key from "off" to "on" position three (3) times at fifteen (15) second intervals. Afterwards, check the entire fuel system for any leaks.
- b. Start the car. Verify that the oil pressure is within the normal operating range. Listen closely. The engine should idle and sound the same as it did before you began the installation. Shutdown the engine, disconnect the oil feed line from the blower. Remove the oil jet from the blower. Blow through the oil jet to ensure there is no blockage or foreign matter plugging it. Reinstall oil jet and oil feed line and proceed.
- **c.** Allow the engine to come to normal operating temperatures. Bleed the cooling system and top off as necessary.

4.2 Check for the following:

- **a.** Fuel leaks
- **b.** Fluid leaks
- **c.** Belt slippage
- **d.** Throttle response

*****CAUTION****

See the supercharger service manual included in your kit for information on supercharger servicing and maintenance, belt tightening, troubleshooting, special tuning, and warranty information.

Now that the work is done, it's time to enjoy your labor of love. Take the car out on the road and let it flex it's muscles, but remember, the response and performance will now be different from that to which you have been accustomed. Have fun!

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Appendix

APPENDIX INDEX

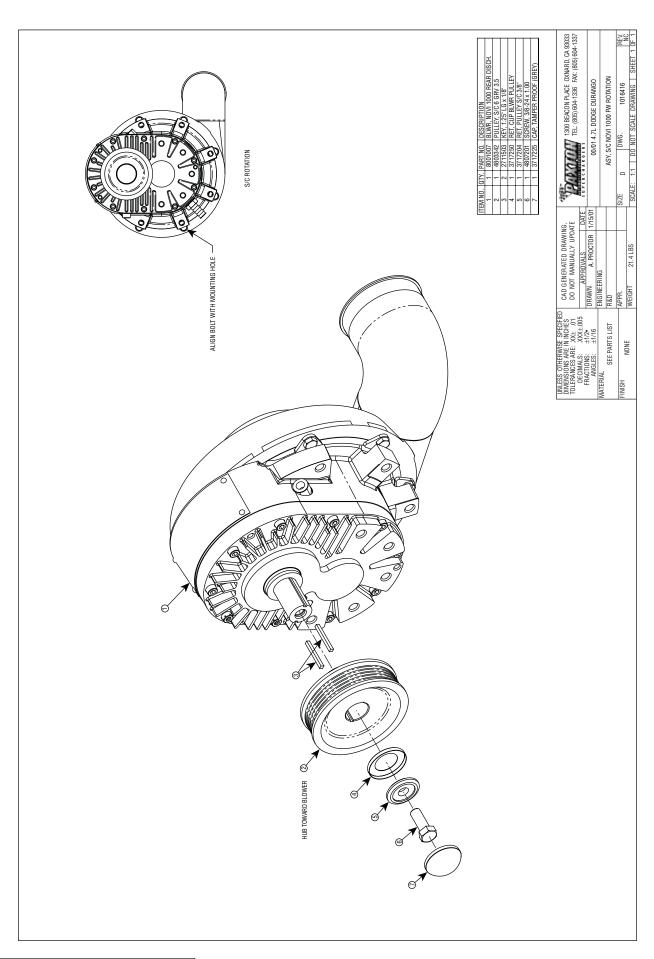
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2	A-4	1016416	ASY, S/C NOVI 1000 FORWARD ROTATION
3	A-5	1016623	ASY, S/C MTG BRKT
4	A-6	1015934	ASY, AIR INTAKE
5	A-7	1017416	ASY, BELT TENSIONER
6	A-8	1019342	ASY, S/C OIL FEED HOSE
7	A-9	1019343	ASY, S/C OIL DRAIN HOSE
8	A-10	1020116	ASY, AIR DISCHARGE WITH FUEL INJECTION
9	A-11	1020217	ASY, HEATER HOSE RELOCATION
10	A-12	1015511	ASY, COMPRESSION BYPASS
11	A-13	1020216	ASY, CRUISE CONTROL RELOCATION
12	A-14	1017718	ENGINE MANAGEMENT WIRING DIAGRAM
13	A-15	1020218	ASY, WASHER HOSE MODIFICATION

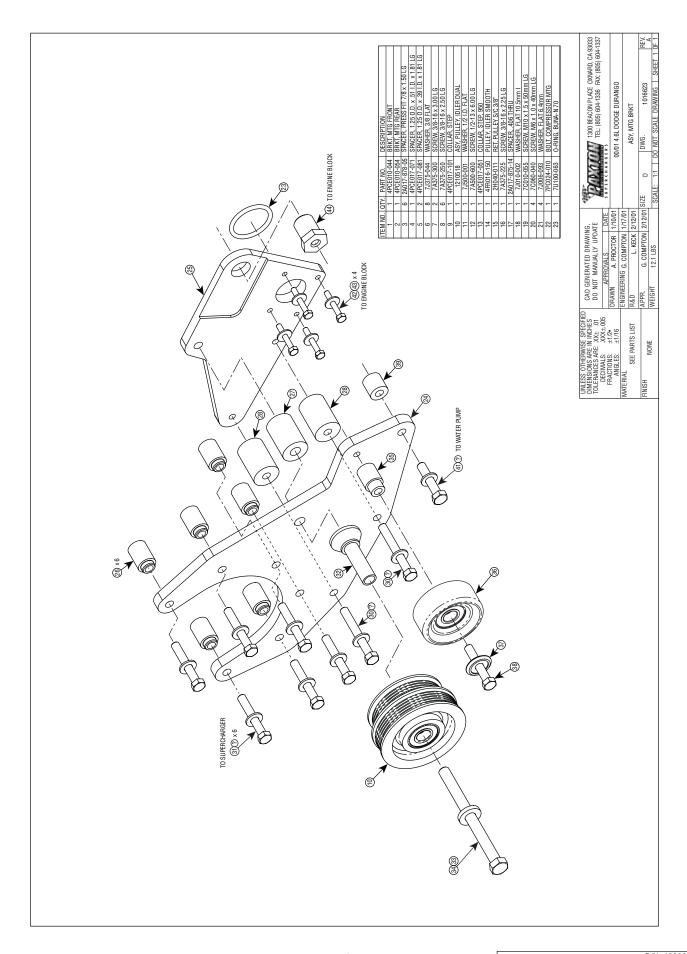
Appendix 1

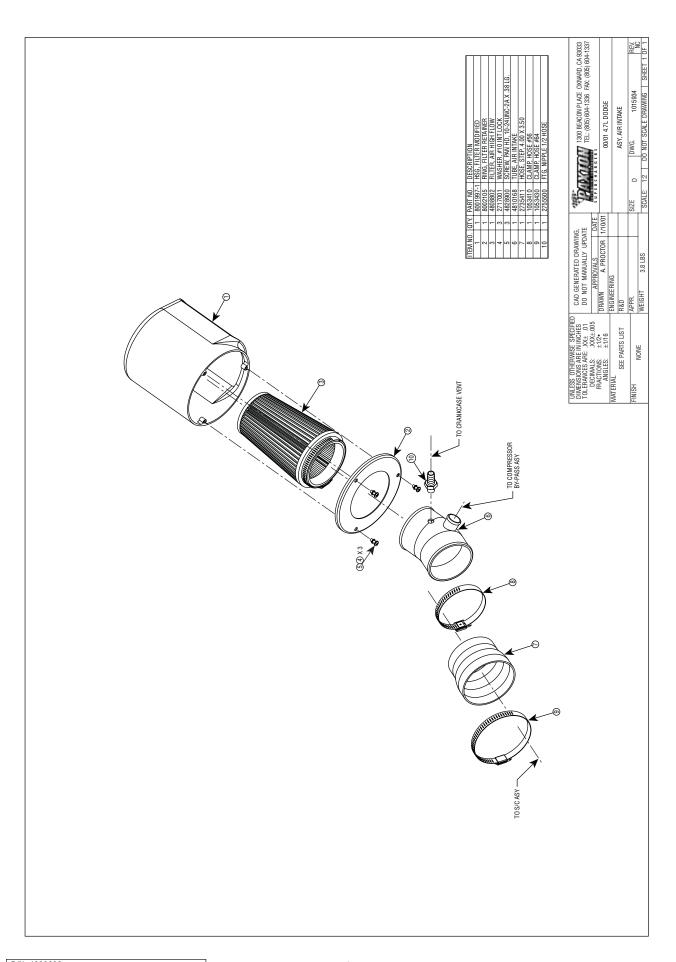
Kit Contents

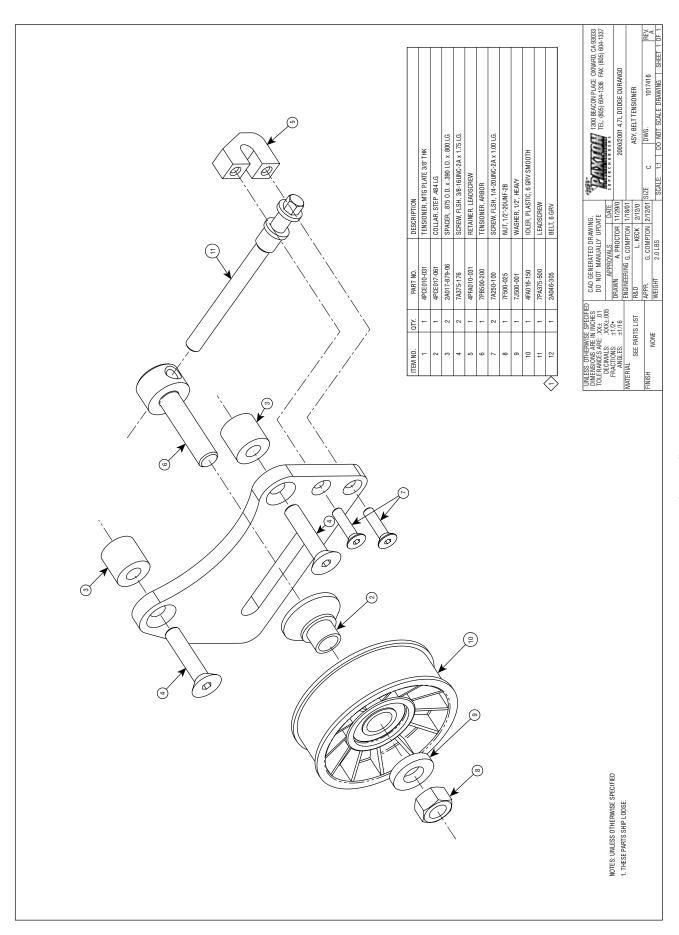
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2	1	1016623	ASY, S/C MTG BRKT
3	1	1015934	ASY, AIR INTAKE
4	-	1017416	ASY, BELT TENSIONER
5	-	1019342	ASY, S/C OIL SUPPLY HOSE
9	-	1019343	ASY, S/C OIL RETURN HOSE
7	-	1020116	ASY, AIR DISCHARGE WITH FUEL INJECTION
8	-	1020217	ASY, HEATER HOSE RELOCATION
6	-	1212616	ASY, COMPRESSOR BYPASS
10	-	1020216	ASY, CRUISE CONTROL RELOCATION
11	-	1017718	ENGINE MANAGEMENT
12	-	1020218	ASY, WASHER HOSE MODIFICATION
13	1	4809632	BOOKLET, INSTRUCTION
14	1	4813001	DECAL, FUEL CAP '92 OCTANE FUEL ONLY"
15	1	4813002	DECAL, GUAGE PANEL "SUPERCHARGED ENGINE"
16	20	4821700	WRAP, NYLON TIE 5.50° LG

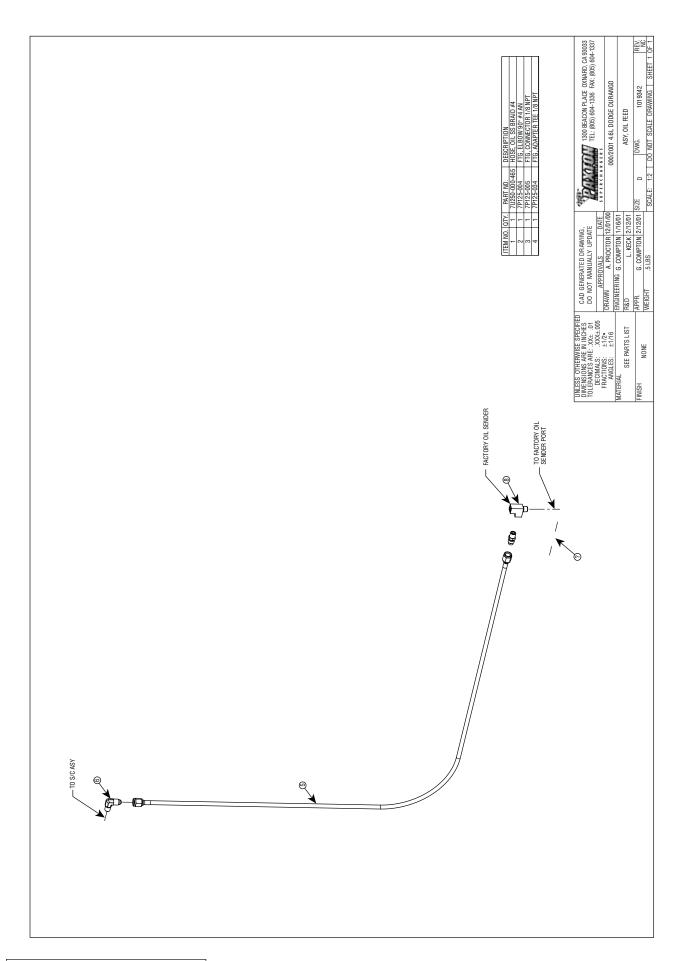
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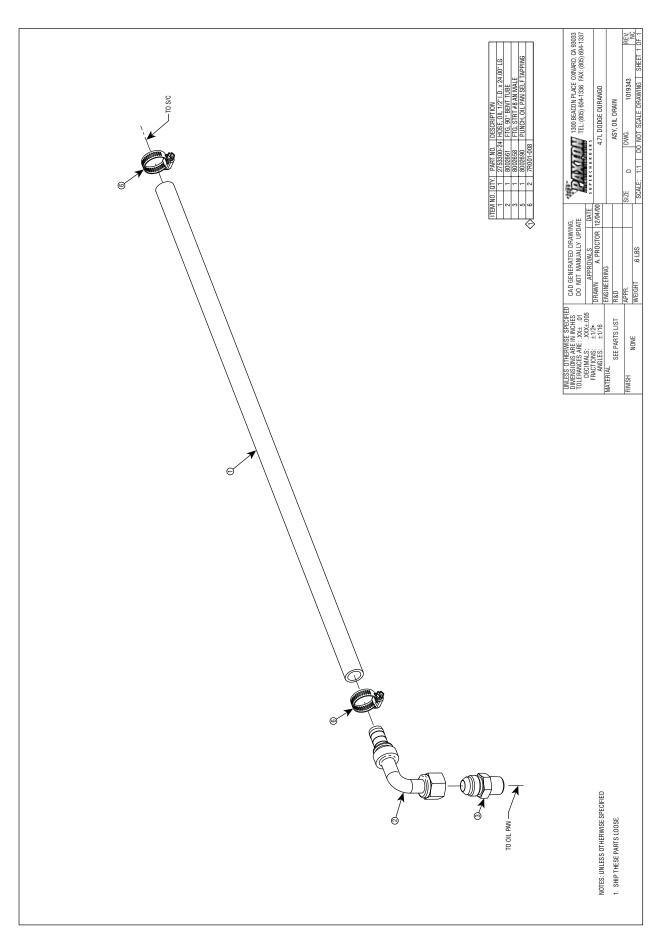


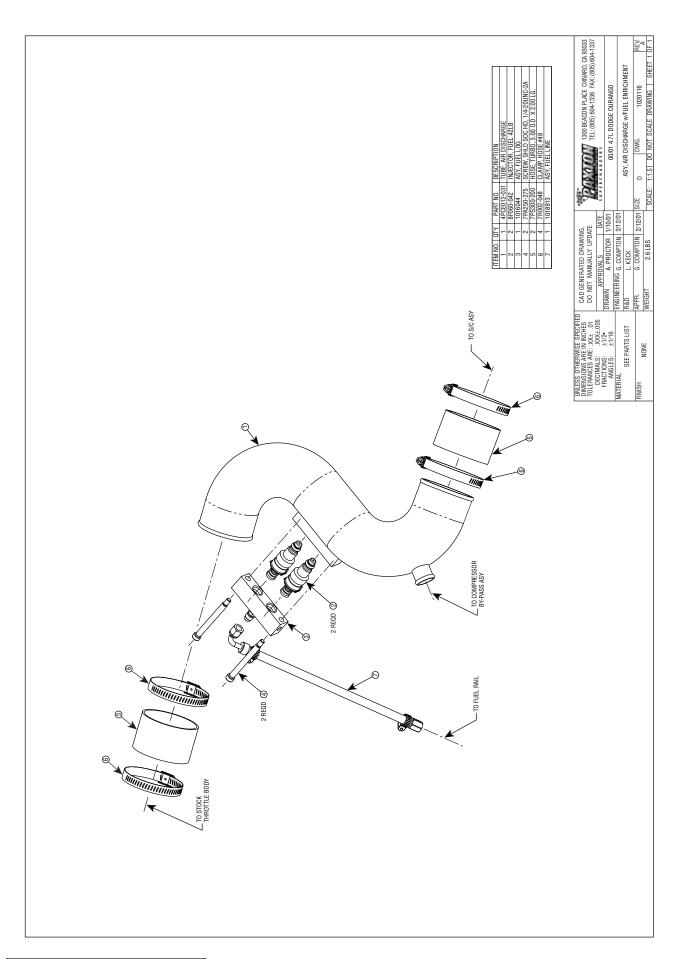


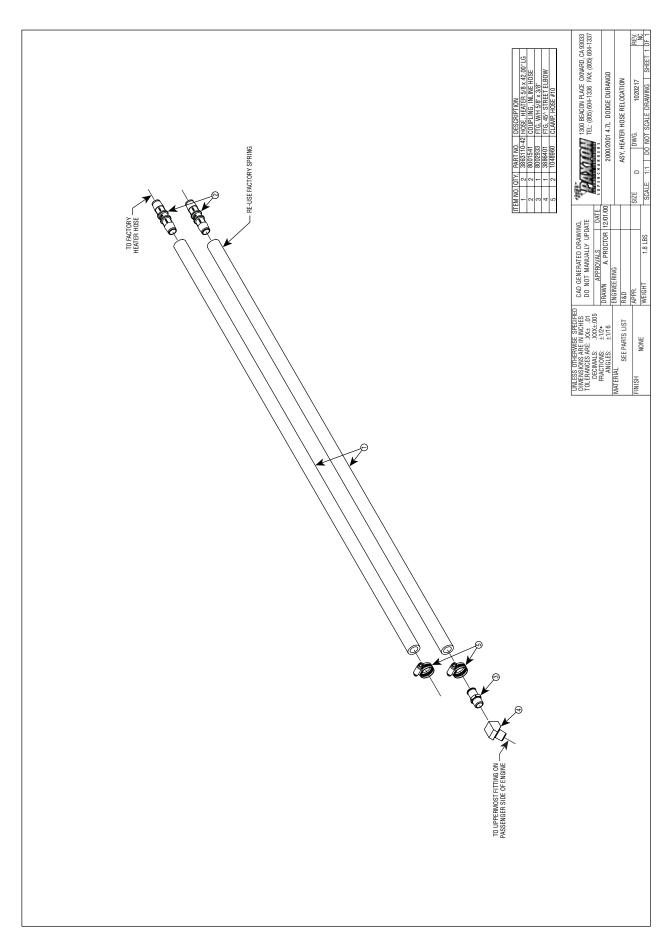


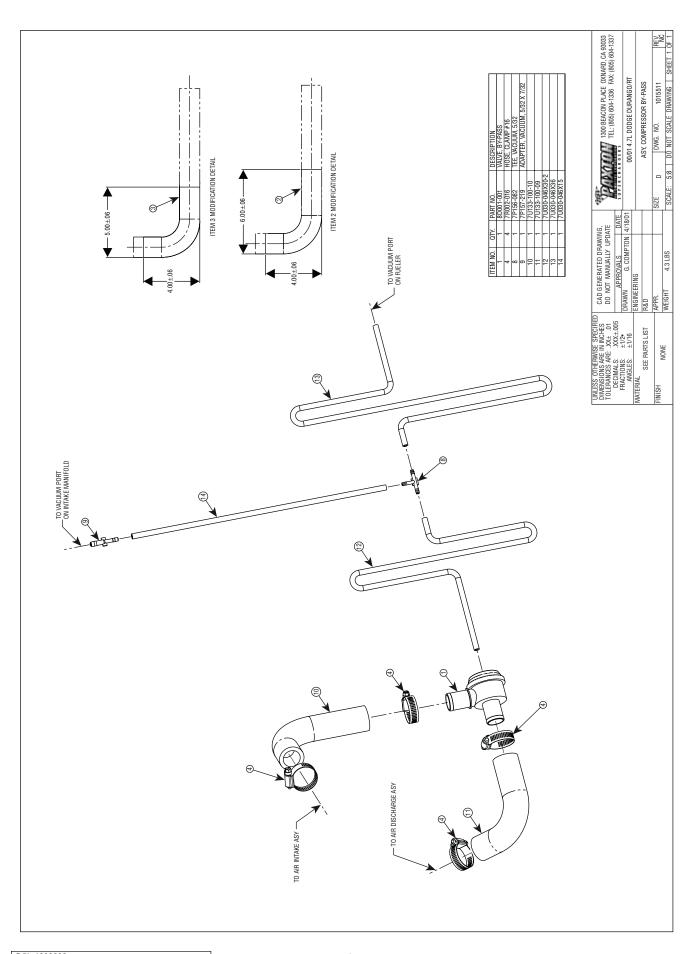


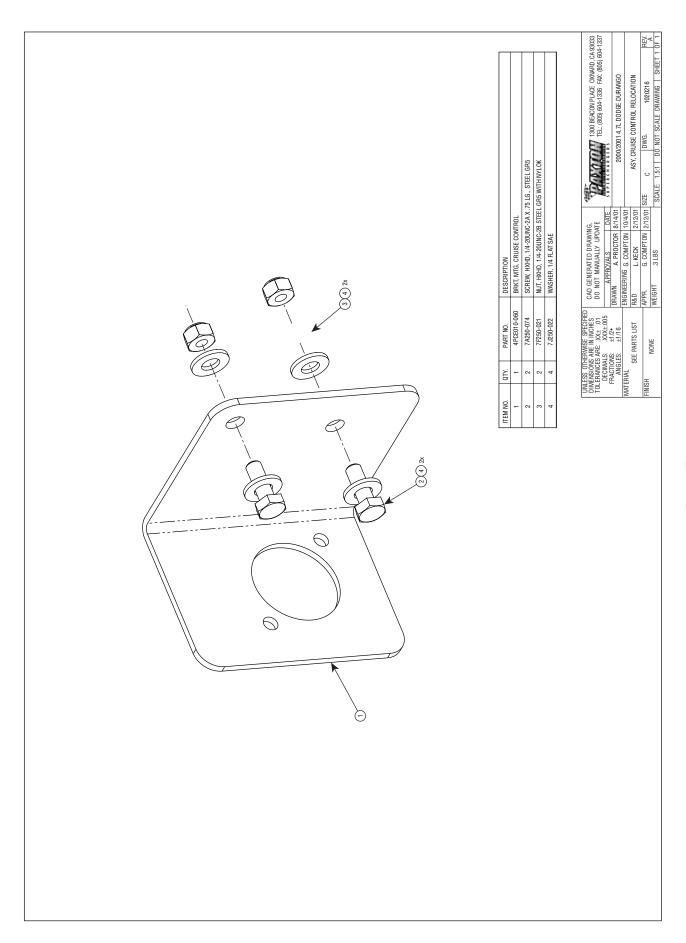


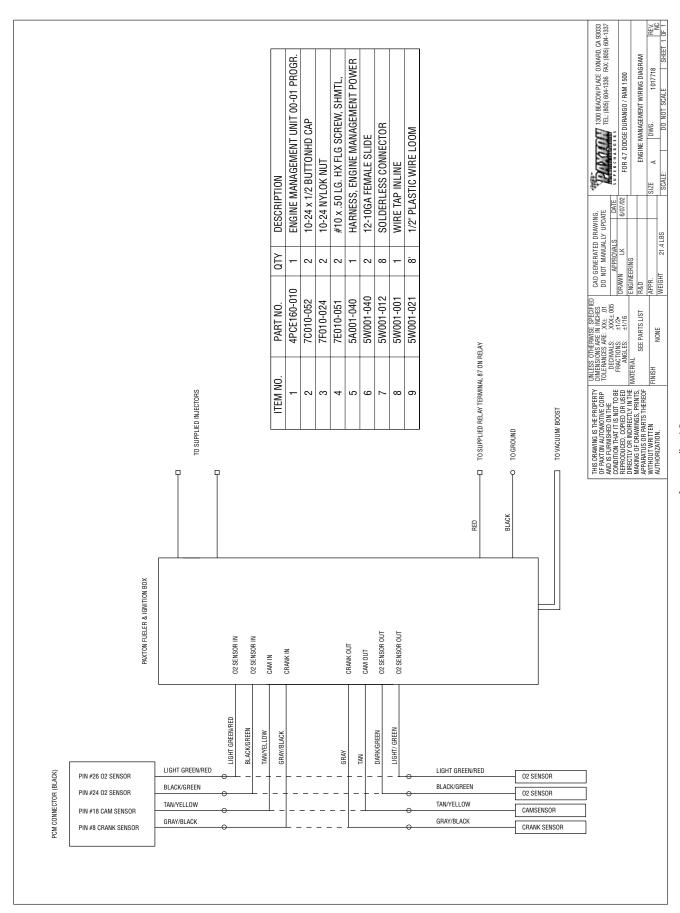


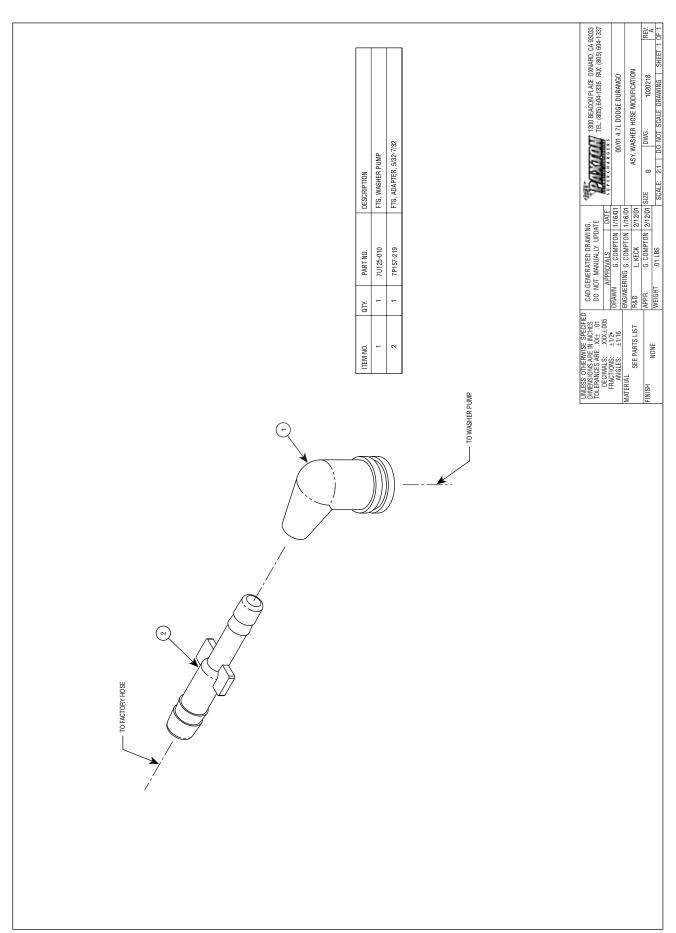














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