INSTALLATION INSTRUCTION

Portable Power

Instruction: 46690883-A-EN
Product: DOOSAN PORTABLE POWER COMPRESSORS
Subject: SERVICE KIT FOR HARNESS AND FUSES MODIFICATION

Kit Number	46690739

MODEL	SERIAL NUMBER
7/73	

ESTIMATED INSTALLATION TIME: 2 HOURS*

***Approximate time only; actual time may vary.**

GENERAL INFORMATION

To avoid duplication, instructions may refer you to the Operation & Maintenance Manual for more detailed instructions.

Read this instruction completely to become familiar with the procedure before beginning the installation.

Use the following procedure to install this kit.

Compressed air is dangerous if incorrectly handled. Before doing any work on the unit, ensure that all pressure is vented from the system and that the machine cannot be started accidently (refer to the Service Manual for the correct procedure). Disconnect both battery poles.

Wear safety glasses to prevent eye injury when any of the following conditions exist:

Pressurized systems or other stored energy components

Flying debris or loose material is present

Tools are being used.

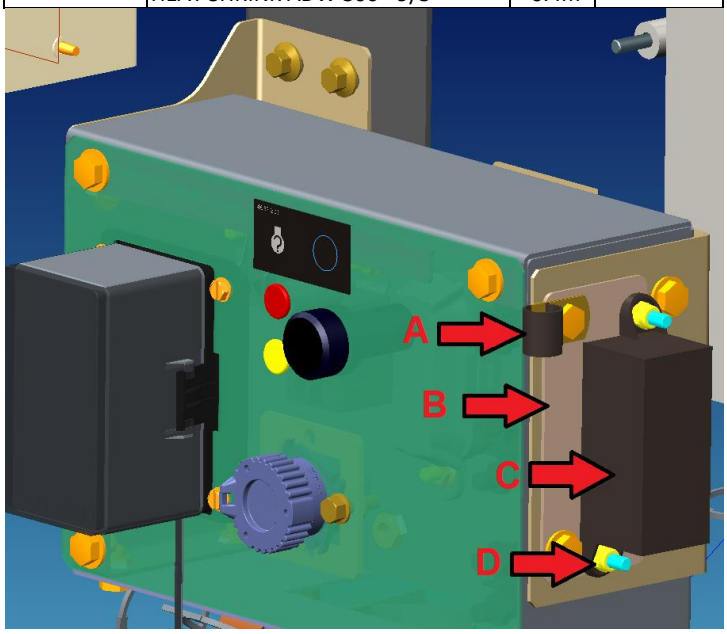
INSTRUCTION

Intention of this modification is to avoid some electrical system malfunctions we had reported to us.

1. Commonly crimped connector is swapped to single one.
2. New fuse holders and fuses F21 F22 replace F 9 and F 10.
3. New F11 fuse and holder is swapped as well. Better cooling and oversized fuse holders will improve reliability of electrical system.
4. Relay K3 moved from relay box to air filter bracket to improve its cooling

KIT CONTENT:

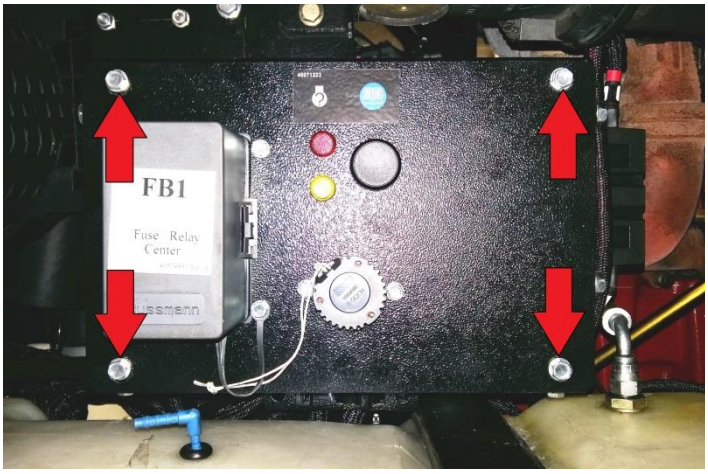
CPN	NAME	QTY	ON PICTURE
46689758	KIT, HARNESS, COMPRESSOR & ENGINE CUMMINS QSF 2.8 S3B	1	
46690353	HARNESS, ENGINE ALTERNATOR	1	
46690376	HARNESS, FUSE	1	
46690830	HARNESS, RELAY	1	
46679995	BRACKET, FUSE	1	B
46561862	FUSEHOLDER	1	C
46606279	FUSE, 125 AMP AMG STYLE	1	
92829316	LOCKNUT, M6 NYLON INSERT	2	D
35222538	CLAMP, .56 IN ID RUBBER COATED SUPPORT ZINC	1	A
36856250	RELAY, 100 AMP	1	
92096015	SCREW, FLANGED M6X16 WHIZ LOCK	2	
36898104	NUT, M6-1.0 HEX FLANGE ZINC	2	
92281427	TIE, CABLE 3.5MM X 200MM	10	
	HEAT SHRINK ADW 300 - 9/3	0.4m	

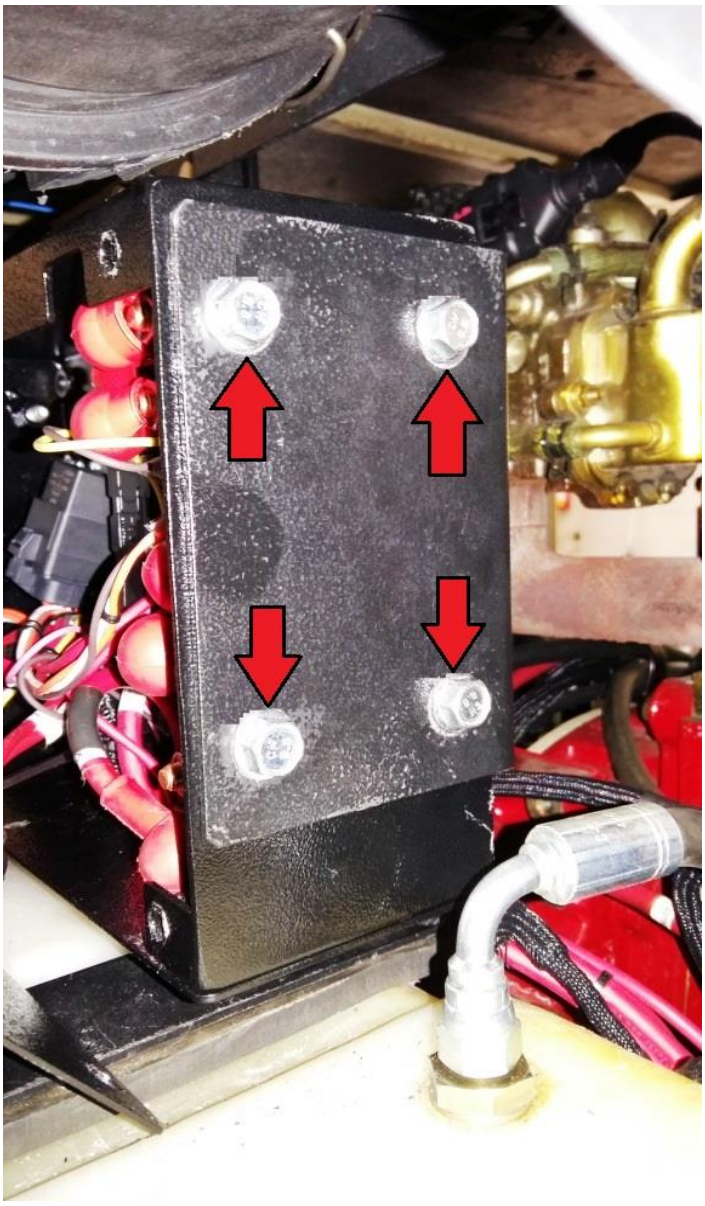


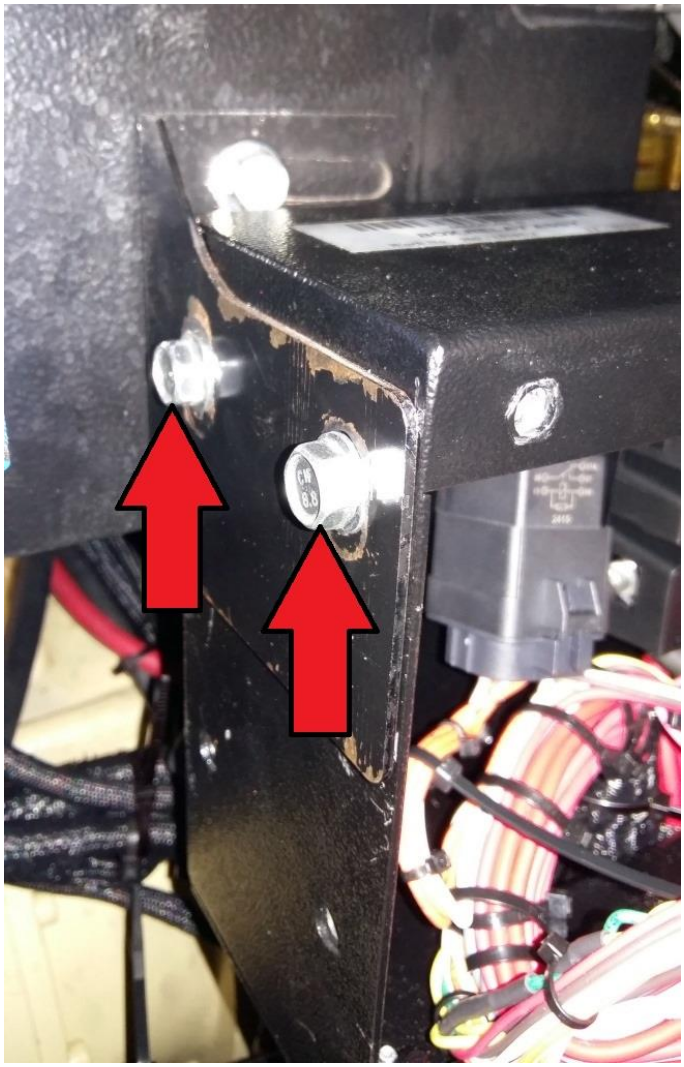
Release the relay box from its position

Unscrew four bolts on front panel of relay box, unscrew four bolts from bracket on the right side of relay box and two bolts on the left side bracket, see pictures.

Figure 1







46689758 HARNESS, Installation

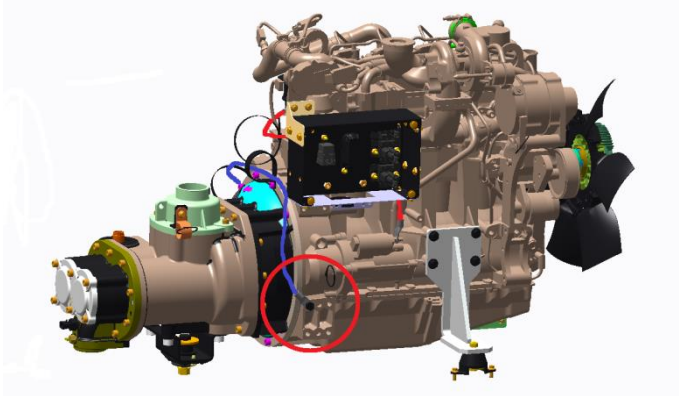
Route the new harness behind relay box and fix to existing harness using cable ties. Do not secure these yet. Two fan connectors lead to electric fans on the oil cooler, two brown wires lead to grounding point on the engine, two red wires and two female terminal wires lead to new K3 relay position on the air filter bracket.

Ground wires connection

Grounding point is on engine block underneath starter, behind fuel tank

Unscrew the bolt **[Figure 2]** from ground connection, there are two thick black wires, add the two brown wires from the harness you just installed.**[Figure 3]** marked GND, and screw the bolt back. Keep eyes surfaces aligned as much as possible. See they do not twist or crack. (Make sure the grounding point is clean and bare of any paint)

Figure 2



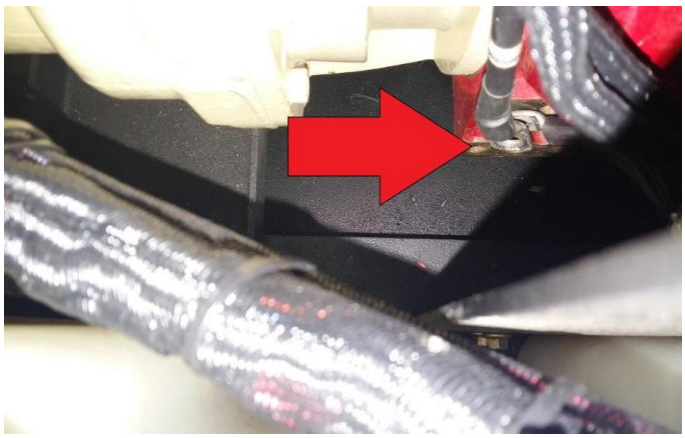
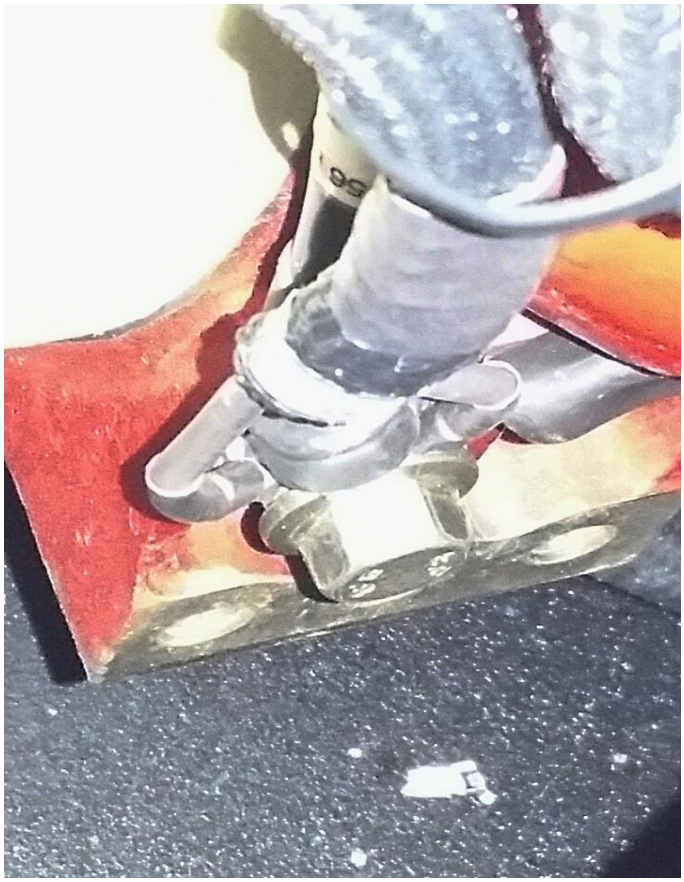


Figure 3

With new wires added



Fuse holders installation

Fuses F21 and F22 as well as two male insulated terminals **[Figure 4]** push through into relay box from the bottom.

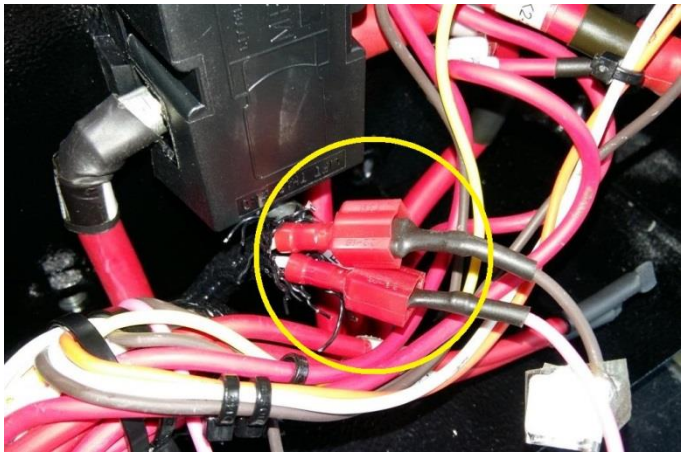
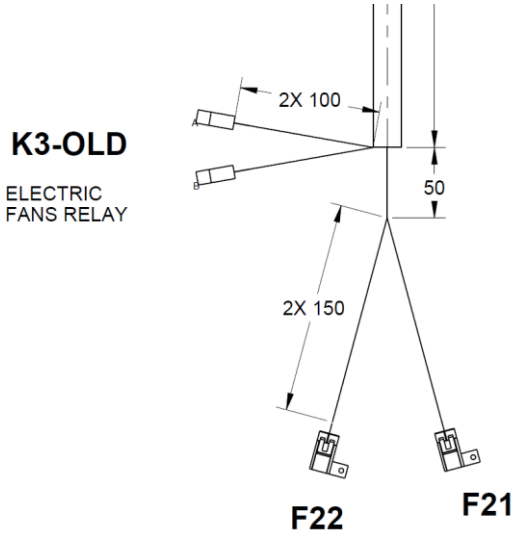
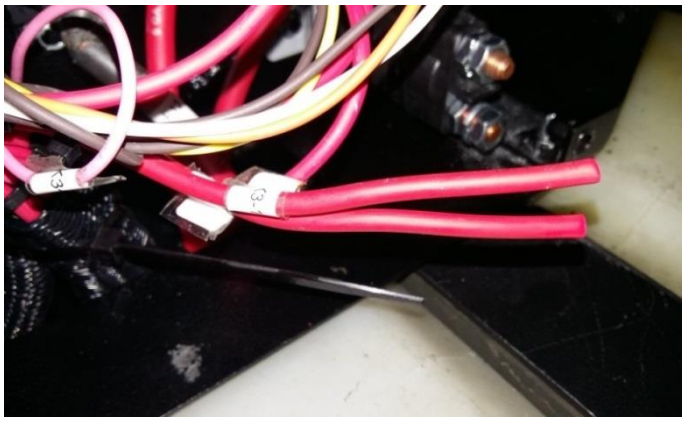


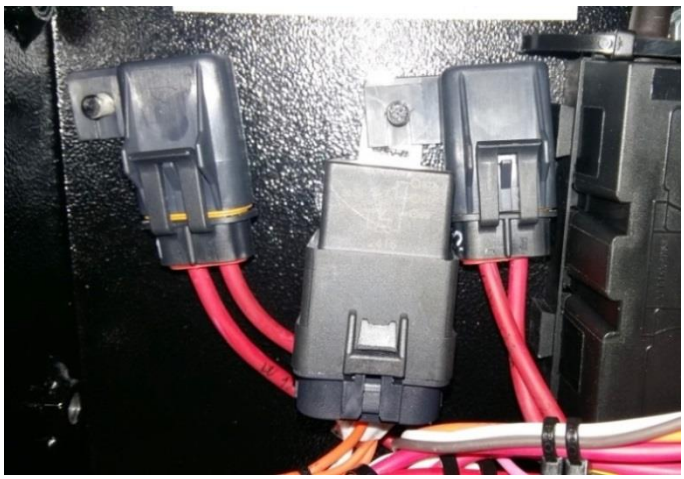
Figure 4

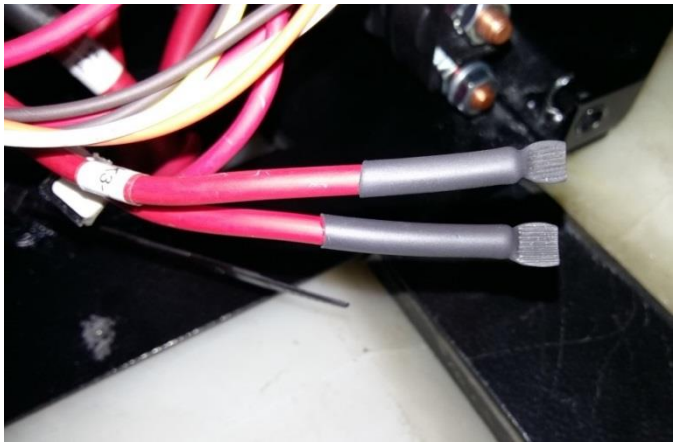




Fix fuse holders to the inside of the relay box. Disconnect two K3 relay coil terminals and connect them to new harness insulated terminals **[Figure 5].** Cut original wires connected to K3 relay crimped into one eye and separately insulate each using heat shrink ADW 300-9/3, 40 mm long each.

Figure 5

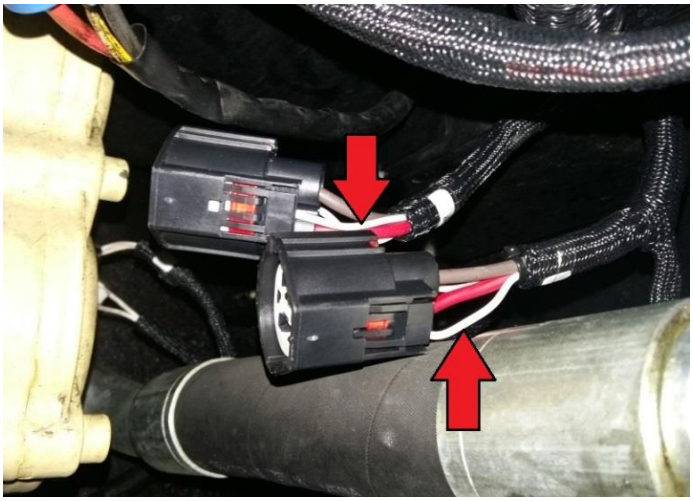




Fan connectors installation

Disconnect the two fan connectors from original harness, then cut the white wire which leads to connector lock in the middle of its visible length see picture **[Figure 6]**. Cut remaining wires closest to connector insulate them all together using heat shrink ADW 300-9/3, 40 mm long each. Using cable tie, fix insulated harness ends to the main harness. Connect new fan connectors.

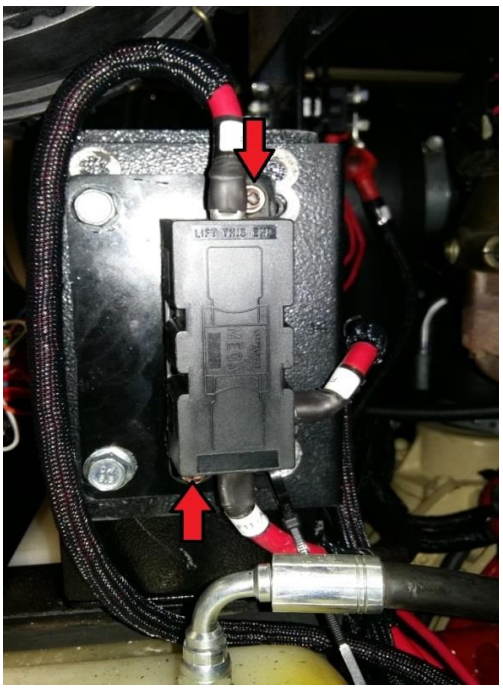
Figure 6



46561862 Fuse holder installation
pre-assembled with
46690353 HARNESS, ENGINE ALTERNATOR
46690376 HARNESS, FUSE
46690830 HARNESS, RELAY

Place fuse holder with fuse 125 A onto fuse bracket 46679995 and fix it using two locknuts M6 with nylon insert 92829316 **[Figure 7].** Don't fix it to relay box bracket yet.

Figure 7



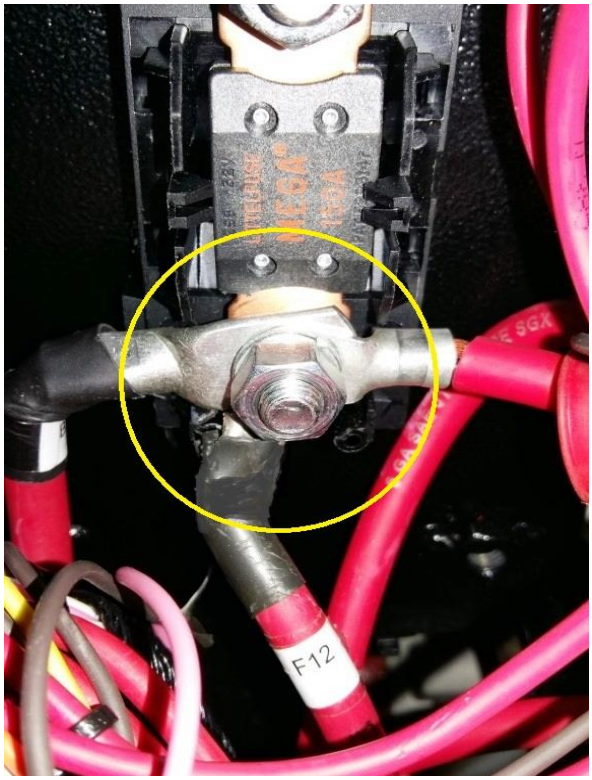
46690353 HARNESS, ENGINE ALTERNATOR

Connect upper red wire with red rubber cap to alternator. **[Figure 8]**

Figure 8

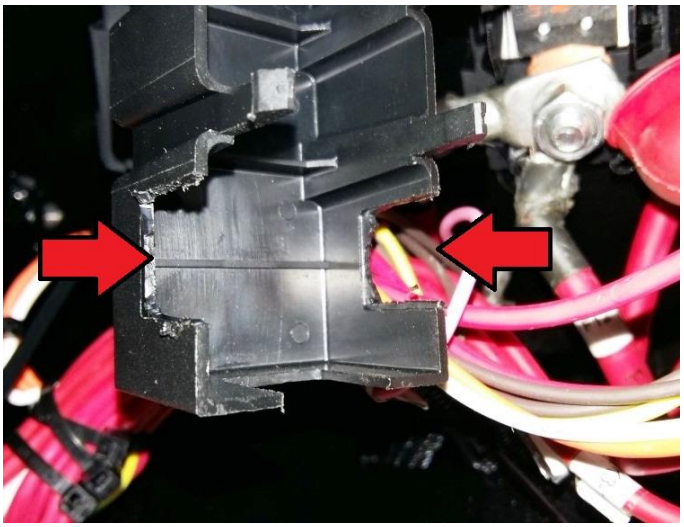
Push red wire with crimped eye of 46690376 harness through bottom of relay box and connect vertically to fuse terminal F12. Turn existing connected eye to 90 deg. clockwise from its original vertical position. Disconnect original wire marked K3 from original K3 relay lower terminal connection and connect it to fuse terminal F12 turned 90 deg. counterclockwise. Place rubber cup on terminal. **[Figure 9]**

Figure 9



Cut square holes into the F12 plastic cover for new wires lead. **[Figure 10]**

Figure 10

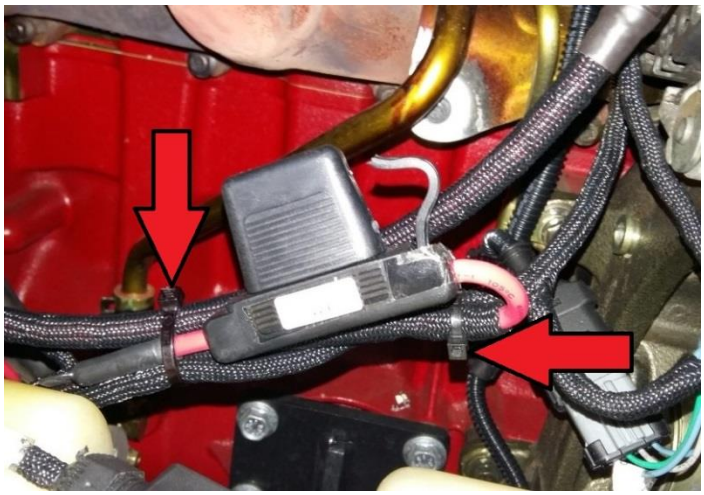


Place cover back to F12 fuse holder **[Figure 11]**

Figure 11

Cut existing eye on original F11 fuse holder and insulate the wire using heat shrink ADW 300-9/3. **[Figure 12]** Remove fuse 80A from holder and close empty holder properly. Use cable tie to fix fuse holder F11 to main harness.

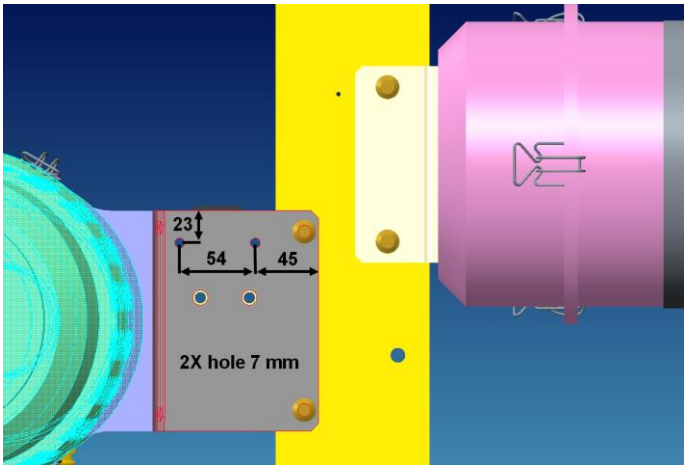
Figure 12



36856250 K3 relay installation

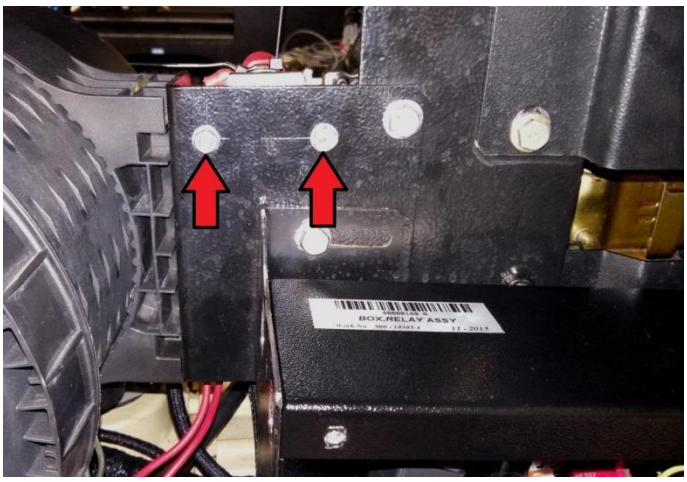
Carefully drill two holes dia. 7 mm according drawing **[Figure 13]** on air filter bracket. Clean the metal shavings came from drilling.

Figure 13



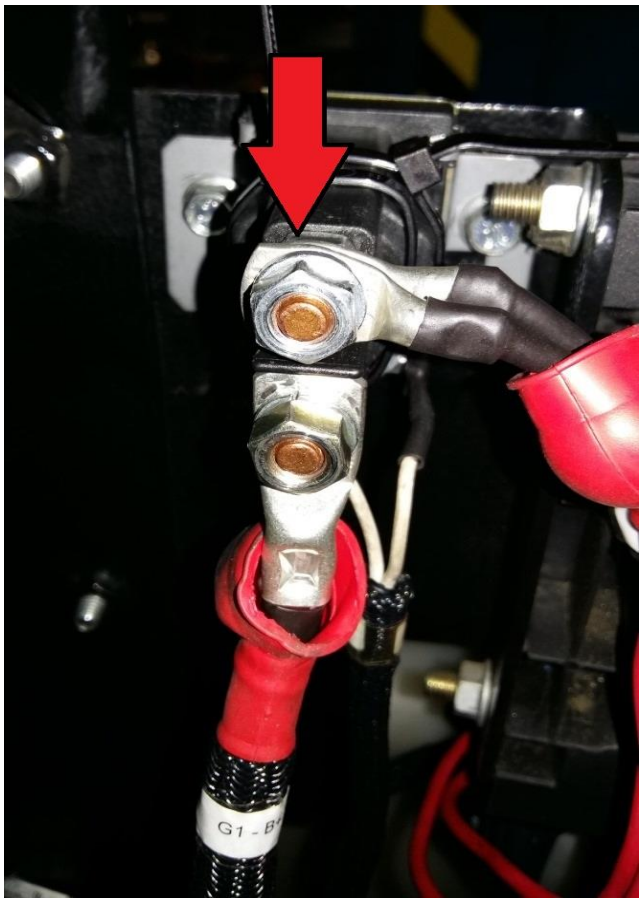
Fix new relay K3 to air filter bracket using two screws 92096015 and two nuts 36898104 **[Figure 14]**

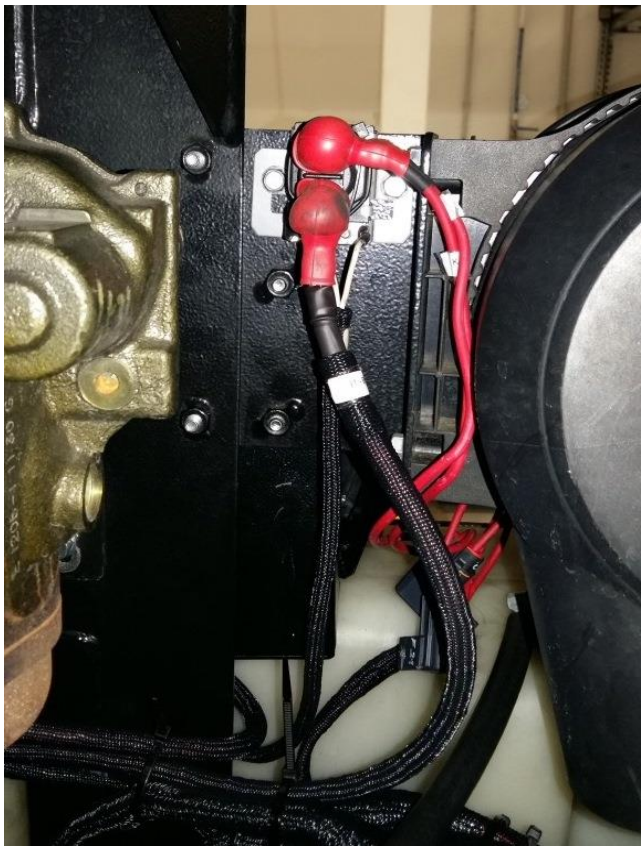
Figure 14



Connect two wires with terminal connectors to new K3 coil terminals.
Connect two red wires with crimped eyes to upper relay terminal connection and 46690830 harness eye with red rubber cup to lower terminal connection. Place rubber cup on terminal. **[Figure 15]**

Figure 15





Tight all cable ties and cut remainders of the cable ties.

Fix relay box back. Four bolts for right bracket, two bolts for the left one. Don’t forget fix new F11 fuse holder together with two bolts of right bracket closer to front panel. Check all connections are tight and correctly positioned. Attach front panel to relay box and fix it with four bolts.

Ensure that no remaining materials or tools are present inside the machine.

Perform 15 minutes test run on fully loaded machine.

Switch OFF the machine and check all modified connections for hot spots and loose connections.