



Portable Power

Service Letter

SL: 40029
Date: 10 August 2013
Product: Compressors
Subject: Weatherproof Relay Replacement Kits

MODEL	SERIAL NUMBER
7/20	121001 thru 129999
7/26E - P90UTM	107000 thru 109287
7/31E	318000 thru 322342
7/41	418800 thru 429000
7/51	440000 thru 443499
7/71 - 12/56	520000 thru 522699

Doosan Infracore Portable Power has determined a possible relay failure could occur on the compressors listed in this letter due to water ingress and/or continuity over relay connection.

Therefore Doosan Infracore Portable Power introduces sealed relay assemblies for the compressors listed in this letter. These sealed relay assemblies are already in use on 7/51 - 7/71 compressors.

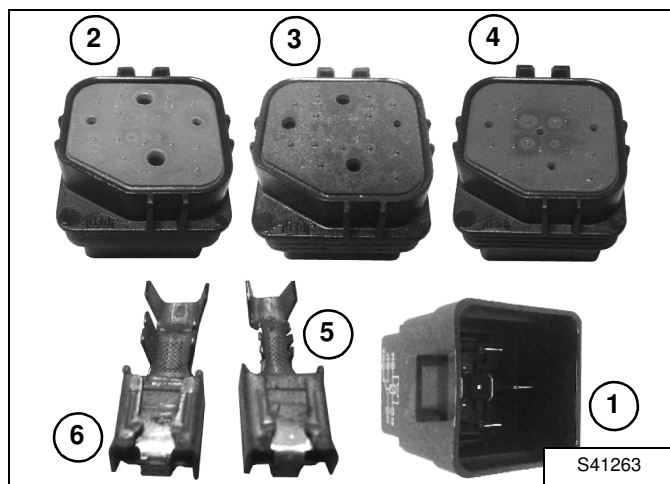
Parts

Different kits will be released to deal with the relay configurations used in the compressors listed in this letter. Each kit will include the parts needed to update one relay to the new sealed type.

P/N	DESCRIPTION	QTY.	MODEL	SERIAL NUMBER
46551362	Kit Relay RT1	1	7/20	121001 thru 129999
46551357	Kit Relay K1-K2	1	7/20	121001 thru 129999
46551357	Kit Relay K3	1	7/26E-7/31E-P90UTM	107000 thru 109287
46551358	Kit Relay K2	1	7/26E-7/31E-P90UTM	107000 thru 109287
46551802	Kit Relay R1	1	7/41	418800 thru 429000
46551357	Kit Relay R3-R6	2	7/41	418800 thru 429000
46551801	Kit Relay R1	1	7/51	440500 thru 442500
46551357	Kit Relay R3-R6	2	7/51	440500 thru 442500
46551801	Kit Relay R1	1	7/71-12/56	520000 thru 522699
46551357	Kit Relay R3	1	7/71-12/56	520000 thru 522699
46551357	Kit Relay K1-K2	2	7/51-7/71-12/56	443500 thru 449999 - 522700 thru 539999
46551362	Kit Relay K5	1	7/51-7/71-12/56	443500 thru 449999 - 522700 thru 539999

Kit Content

Figure 1



- 12V relay (P/N 36878361) (Item 1) **[Figure 1]**. Same P/N for all relay locations.
- Relay base (P/N 12065686) (Item 2), (P/N 12065971) (Item 3), and (P/N 12092605) (Item 4) **[Figure 1]**. Five different ones due to wire entry location and size requiring another seal ((P/N 15326224) (Item 7) and (P/N 12065686) (Item 8) not shown in **[Figure 1]**).
- Terminals (P/N 12033997) (small size) (Item 5) and (P/N 12020156) (large size) (Item 6) **[Figure 1]**. Two different sizes determined by the wire gauge that is used.

Reference Table Connections

MODEL	HARNESS P/N	RELAY AND CONNECTIONS	P/N	DESCRIPTION	QTY.
7/20	46551546	RT1	12092605	Connector, Plug 4 Way Relay	1
		K1, K2	12065686	Connector, Plug 4 Way Relay	2
		RT1, K1-2(85),5(86) K2-2(85),5(86)	12020156	Terminal, Female 20-18 AWG Pull-To-Seat	8
		K1-1(30),4(87), K2-1(30),4(87)	12033997	Terminal, Female 12-10 AWG Pull-To-Seat	4
		RT1, K1, K2	36878361	Relay, 12V Weatherproof	3

MODEL	HARNESS P/N	RELAY AND CONNECTIONS	P/N	DESCRIPTION	QTY.
7/26E - 7/31E - P90UTM	46551540	K3	12065686	Connector, Plug 4 Way Relay	1
		K2	12065971	Connector, Plug 4 Way Relay	1
		K3-2(85),5(86), K2-2(85)	12020156	Terminal, Female 20-18 AWG Pull-To-Seat	3
		K3-1(30),4(87), K2-1(30),4(87),5(86)	12033997	Terminal, Female 12-10 AWG Pull-To-Seat	5
		K2, K3	36878361	Relay, 12V Weatherproof	2

MODEL	HARNESS P/N	RELAY AND CONNECTIONS	P/N	DESCRIPTION	QTY.
7/26E - 7/31E - P90UTM	46551534	K3	12065686	Connector, Plug 4 Way Relay	1
		K2	12065971	Connector, Plug 4 Way Relay	1
		K3-2(85),5(86), K2-2(85)	12020156	Terminal, Female 20-18 AWG Pull-To-Seat	3
		K3-1(30),4(87), K2-1(30),4(87),5(86)	12033997	Terminal, Female 12-10 AWG Pull-To-Seat	5
		K2, K3	36878361	Relay, 12V Weatherproof	2

MODEL	HARNESS P/N	RELAY AND CONNECTIONS	P/N	DESCRIPTION	QTY.
7/41	22179550	R1	12066033	Connector, Plug 4 Way Relay	1
		R3, R6	12065686	Connector, Plug 4 Way Relay	2
		R1, R3-2(85),5(86), R6-2(85),5(86)	12020156	Terminal, Female 20-18 AWG Pull-To-Seat	8
		R3-1(30),4(87), R6-1(30),4(87)	12033997	Terminal, Female 12-10 AWG Pull-To-Seat	4
		R1, R3, R6	36878361	Relay, 12V Weatherproof	3

MODEL	HARNESS P/N	RELAY AND CONNECTIONS	P/N	DESCRIPTION	QTY.
7/51	23309511	K1, K2	12065686	Connector, Plug 4 Way Relay	2
		K1-1(30),4(87), K2-1(30),4(87)	12033997	Terminal, Female 12-10 AWG Pull-To-Seat	4
		K1-2(85),5(86), K2-2(85),5(86), K5	12020156	Terminal, Female 20-18 AWG Pull-To-Seat	8
		K5	12092605	Connector, Plug 4 Way Relay	1
		K1, K2, K5	36878361	Relay, 12V Weatherproof	3

MODEL	HARNESS P/N	RELAY AND CONNECTIONS	P/N	DESCRIPTION	QTY.
7/51	22464341	R1	15326224	Connector, Plug 4 Way Relay	1
		R3, R6	12065686	Connector, Plug 4 Way Relay	2
		R1, R3-2(85),5(86), R6-2(85),5(86)	12020156	Terminal, Female 20-18 AWG Pull-To-Seat	8
		R3-1(30),4(87), R6-1(30),4(87)	12033997	Terminal, Female 12-10 AWG Pull-To-Seat	4
		R1, R3, R6	36878361	Relay, 12V Weatherproof	3

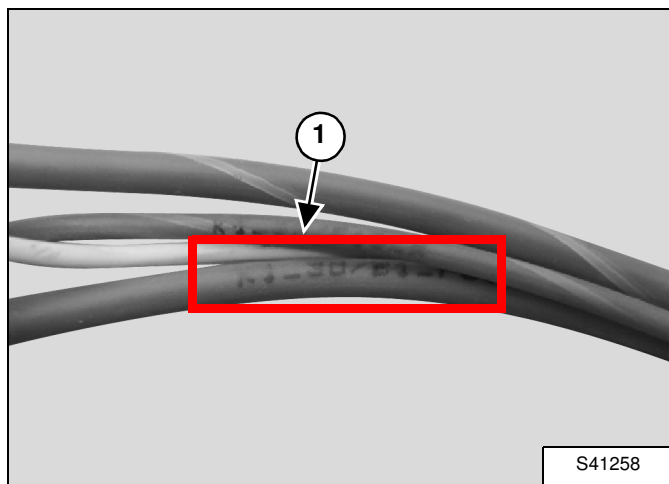
MODEL	HARNESS P/N	RELAY AND CONNECTIONS	P/N	DESCRIPTION	QTY.
7/71 - 12/56	23343080	K1, K2	12065686	Connector, Plug 4 Way Relay	2
		K1-1(30),4(87), K2-1(30),4(87)	12033997	Terminal, Female 12-10 AWG Pull-To-Seat	4
		K1-2(85),5(86), K2-2(85),5(86), K5	12020156	Terminal, Female 20-18 AWG Pull-To-Seat	8
		K5	12092605	Connector, Plug 4 Way Relay	1
		K1, K2, K5	36878361	Relay, 12V Weatherproof	3

MODEL	HARNESS P/N	RELAY AND CONNECTIONS	P/N	DESCRIPTION	QTY.
7/71 - 12/56	22464358	R1	15326224	Connector, Plug 4 Way Relay	1
		R3	12065686	Connector, Plug 4 Way Relay	1
		R1, R3-2(85),5(86)	12020156	Terminal, Female 20-18 AWG Pull-To-Seat	7
		R3-1(30),4(87)	12033997	Terminal, Female 12-10 AWG Pull-To-Seat	2
		RT1, R3	36878361	Relay, 12V Weatherproof	2

Procedure

Disconnect the battery.

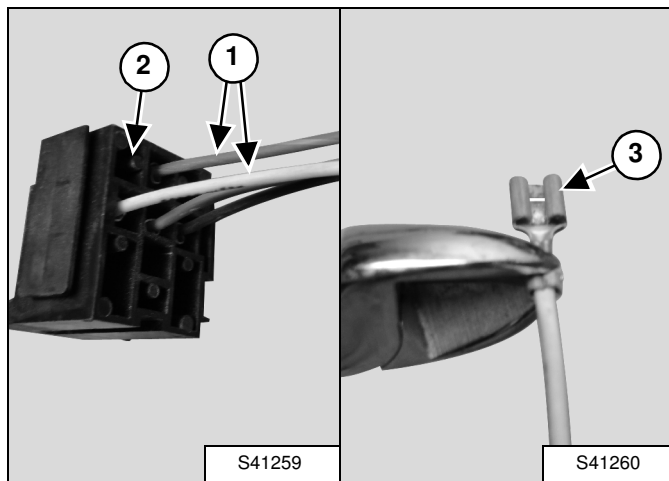
Figure 2



Access the relay location and check the relay identification (Item 1) [Figure 2] which is marked on the harness (example for K1-30: K1 is the relay position and 30 is the pin to be used on that relay). Choose the correct kit according to the machine and relay type (See "Reference Table Connections" on page 2).

Mark the relay wires according to the location on the relay (30 - 87...) or use the wire identification (Item 1) [Figure 2] as marked in relation to the position.

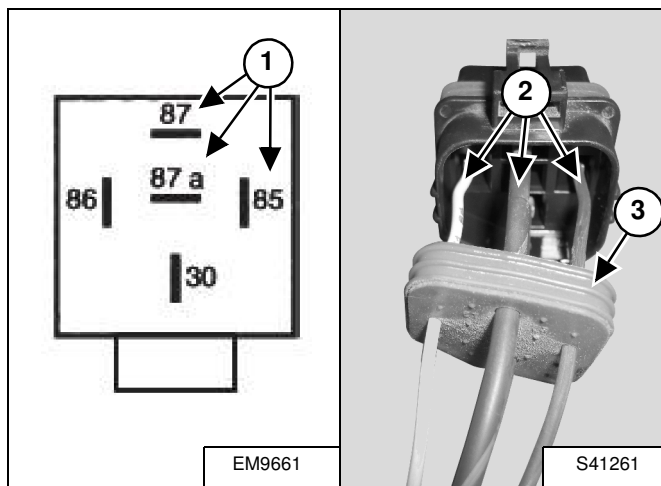
Figure 3



Pull all wires (Item 1) from the original relay base (Item 2) and cut the wires as close as possible to the terminals (Item 3) [Figure 3].

Discard the original relay and base.

Figure 4



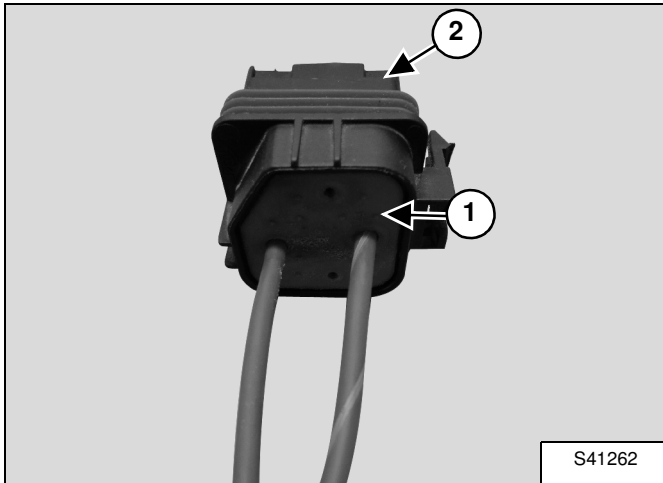
Check the terminal identification (Item 1) on the new relay and push each wire (Item 2) through its corresponding cavity in the sealed relay base (Item 3) [Figure 4].

NOTE: Double-check if every cavity in the sealed relay base has the correct wire number installed.

Crimp the new terminals on the wires (Item 2) [Figure 4] using a Delphi Metri-Pack crimp tool 10-12 AWG (P/N 12071687), a Delphi Metri-Pack crimp tool 14-20 AWG (P/N 6285847) or a general purpose crimp tool (from 10 to 20 AWG). Use the right size terminals according to the wire gauge.

Pull the wires (Item 2) until the terminals lock into place in the sealed relay base (Item 3) [Figure 4]. Push the seal in place around the wire entry points.

Figure 5



Install the sealed relay base (Item 1) in the 12V relay (Item 2) **[Figure 5]** and push until it is locked.

Install the relay on the frame in its original position.

Reconnect the battery and test the operation of the relay.

If the relay works properly, proceed to the next relay to be replaced.

NOTE: When pressure washing compressors, take care to protect electrical components from water ingress. **DO NOT** direct the water jet directly on any of these components (including compressor and engine controller, connectors, sensors, solenoids and others). Use electrical spray to protect terminals from corrosion and safeguard continuity. Failure to follow these guidelines can lead to component damage and compressor downtime.

This letter is provided as technical information only and does not alter warranty coverage.