Instruction Sheet
Document Number 1620511-02

Electrically Controlled Timing Valve Upgrade Kit for Prodigy® Transfer Pump

WARNING: Allow only qualified personnel to perform the following tasks. Follow the safety instructions in this document and all other related documentation.

The Electrically Controlled Timing Valve Upgrade Kit for Prodigy® Transfer Pump replaces the pneumatic timing valve for better control, enhanced reliability, and longer life. Use this instruction sheet to install the upgrade kit.

Two options of the kit are available: one with a turbine generator and one without.

- Kit with turbine generator − The turbine generator uses compressed air to generate 24 Vdc for the electrically controlled timing valve. Therefore, when the air is turned on, the pump turns on. When air is turned off, the pump turns off.
- Kit without turbine generator − The electrically controlled timing valve must be powered by an external source. The pump turns on when 24 Vdc turns on, and the pump turns off when 24 Vdc is turned off. Air must still be supplied to the pump, but the air does not trigger the pump on/off.

NOTE: For kits without turbine generator, an optional cable is available to wire out to external power supply. Cable must be ordered separately.

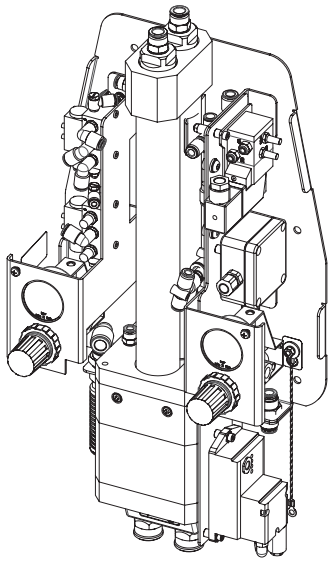

Figure 1 Prodigy Transfer Pump with Upgrade Kit (shown with turbine generator)

Installation

1. Turn off the air supply and remove the transfer pump cover.
2. Disconnect 8 mm air supply tube from pump.
3. See Figure 2. Remove and discard tubing R.
4. Disconnect tubing L and M from the unions labeled T1 and T2 in Figure 2.

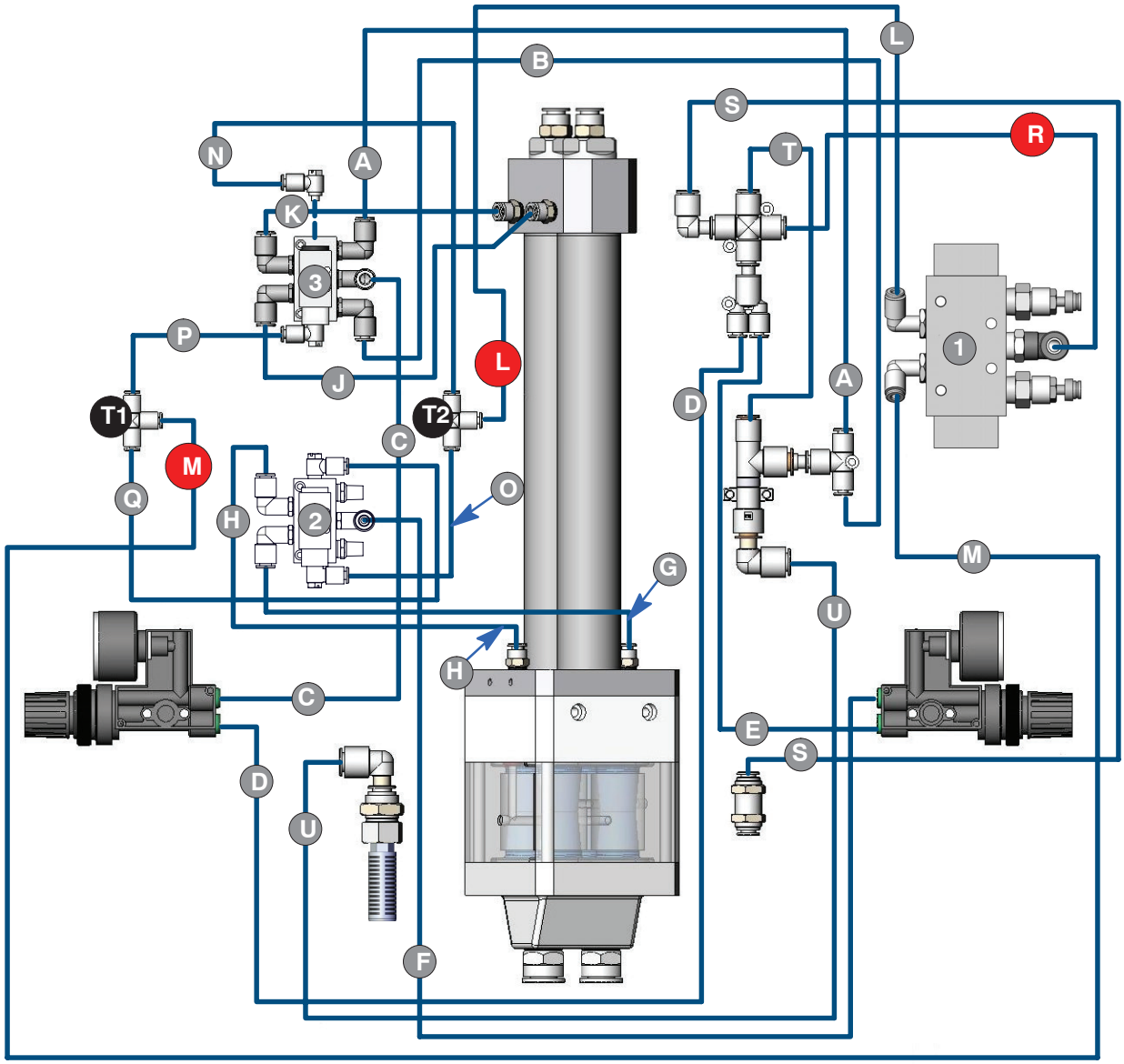

Figure 2 Transfer Pump Tube Routing

5. See Figure 3. Remove and discard valve (2) with tubing L and M, adapter plate (1), and hardware.

CAUTION: When completing the next steps, be careful not to kink tubing.

6. Disassemble the 60 psi regulator/gauge (3) from the pump by removing the plastic nut (5).
7. Disconnect tubing E and F from the regulator. Reroute tubing E (6) to come out from under the existing bracket (7).

   NOTE: Tubing F should already be routed under the bracket. If it is not, reroute the same way as tubing E.

8. Remove bulkhead fitting nut (4) at bottom of pump and retain for timing valve kit installation.

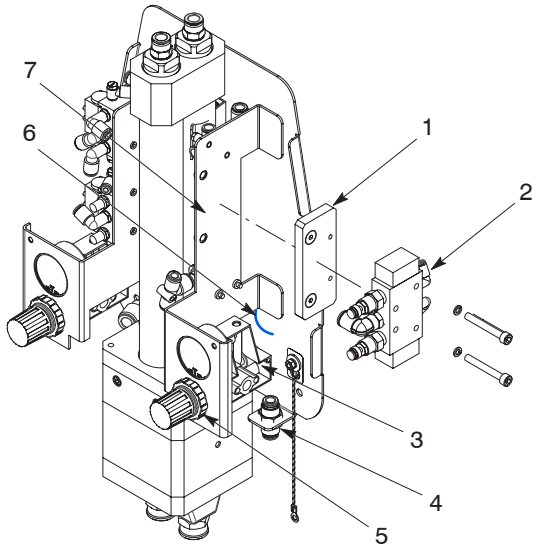

Figure 3 Disassembling Side of Pump

9. See Figure 4. Tilt and slide the timing valve upgrade kit into position along existing bracket. Complete the following for proper placement of the timing valve kit:
   - Adjust tubing E and F to fit through opening in mounting plate.
   - Align the two mounting holes to the existing pump bracket.
   - Align the tab with hole below pump plate at bulkhead fitting.
10. Install the two M6 x 10 button screws (8) and split washers (9) to secure the timing valve kit to the existing bracket.
11. Reinstall the bulkhead fitting nut (4).
12. Reinstall the 60 psi regulator/gauge (3) with the plastic nut (5). Reconnect tubing E and F to the regulator.

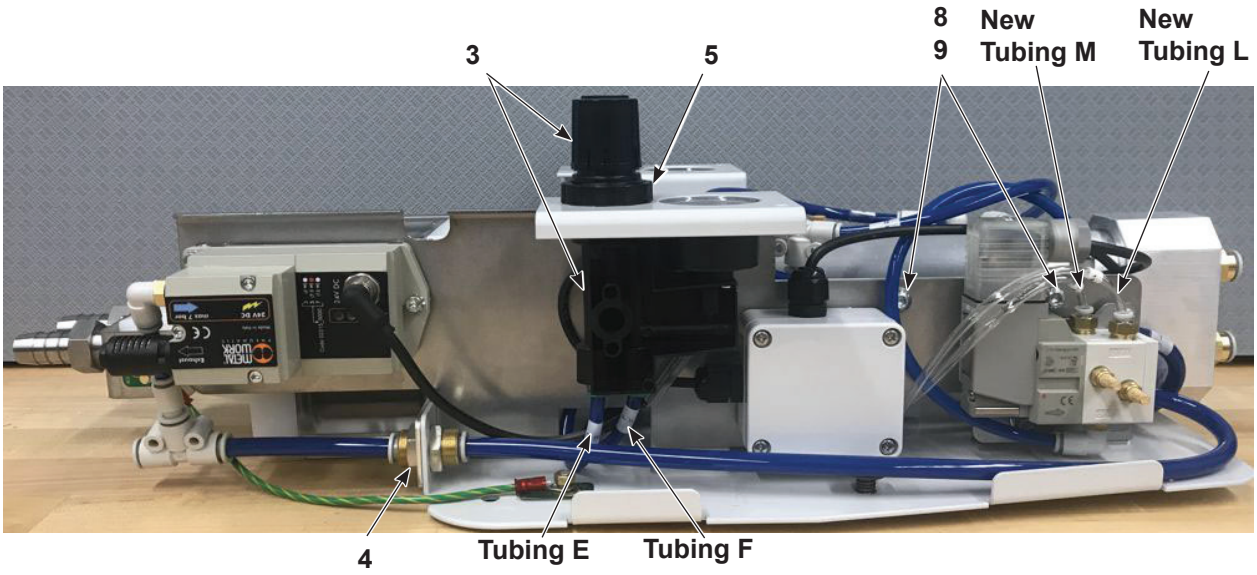

Figure 4 Installing Timing Valve Kit

13. See Figure 5. Loop and tuck control valve cable (10) between the pump and existing bracket.
14. Install 8 mm x 6 mm reducer (11) into the existing cross connector.

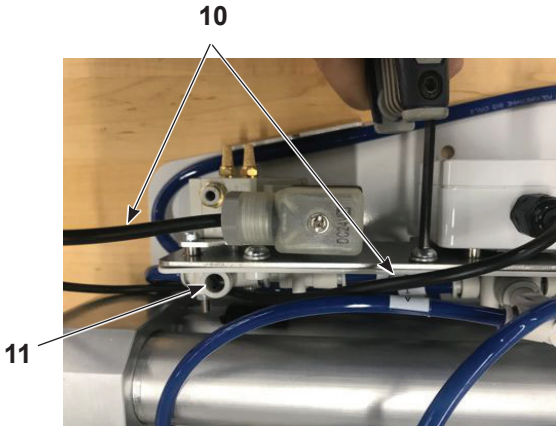

Figure 5 Routing Control Valve Cable

15. See Figure 6. Take new R tubing and install from new reducer to new control valve.
16. See Figure 4 and Figure 6. Install new L and M tubing, routing the tubing behind the pump housing to connect existing unions to the ports on new control valve.
    - Tubing L to Port A
    - Tubing M to Port B

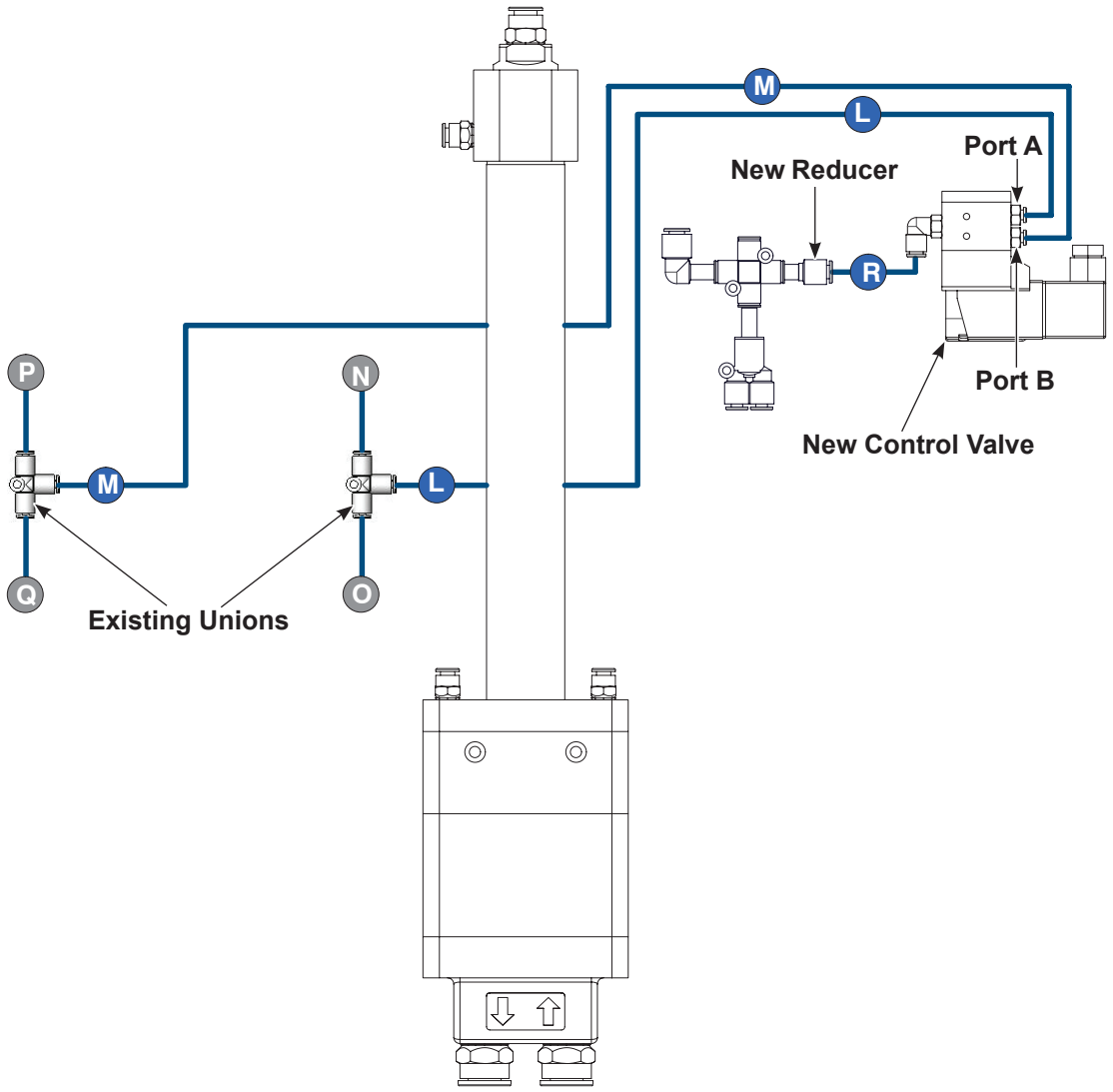

Figure 6 New Tube Routing

17. For kits with turbine generator complete the following:
    a. See Figure 7. Install the 8 mm tubing V into the pump bulkhead fitting.
    b. Install the 8 mm union tee onto the V tubing.
    c. Install the 6 mm reducer and tubing W to the connector generator to tee.
    d. Continue to step 19.

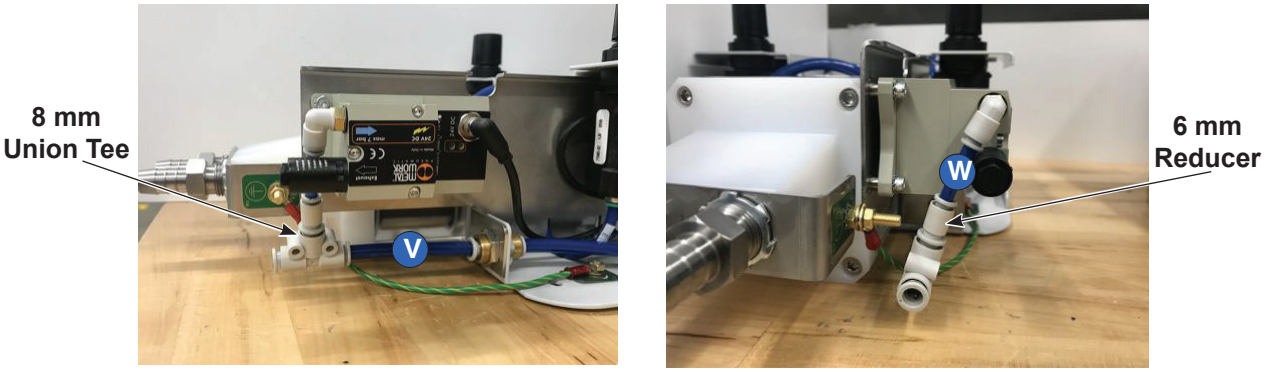

Figure 7 Turbine Generator Connections and Tubing

18. For kits without turbine generator complete the following steps:
    a. See Figure 8. Wire the 3-pin cable (ordered separately) to customer provided 24 Vdc power supply. For additional wiring reference, see Figure 9.
    b. From the junction box, connect the cable with the M8 connector into the 3-pin cable (ordered separately). Make sure to align pins carefully.

NOTE: Tubing V and W included in tubing kit are not applicable for kits without turbine generator. Tubing V and W can be discarded.

19. Reinstall the transfer pump cover. Reconnect 8 mm air supply tube to transfer pump. The pump is now ready to put back in operation.

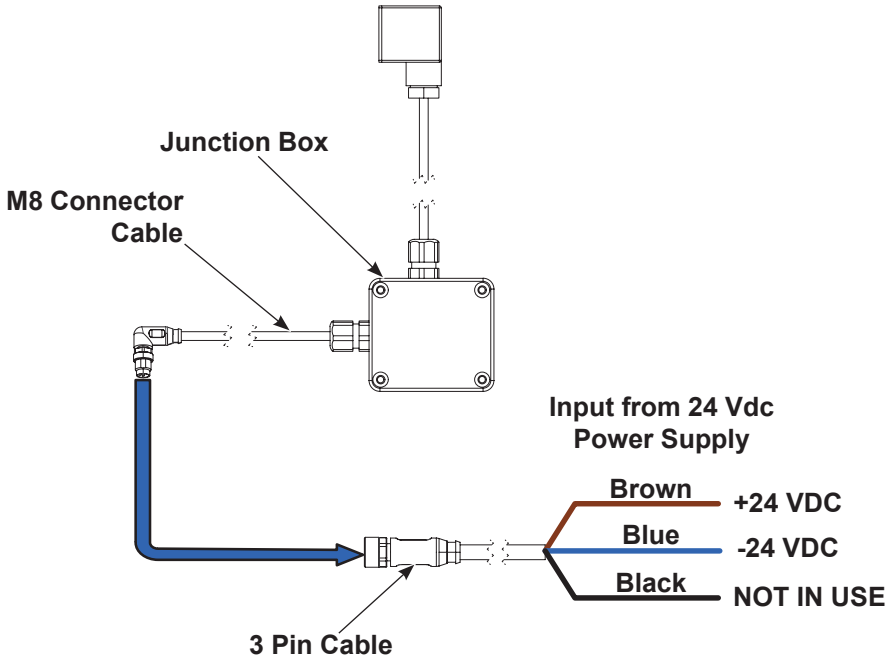

Figure 8 Junction Box M8 Connector to 3-Pin Cable to External Power Supply

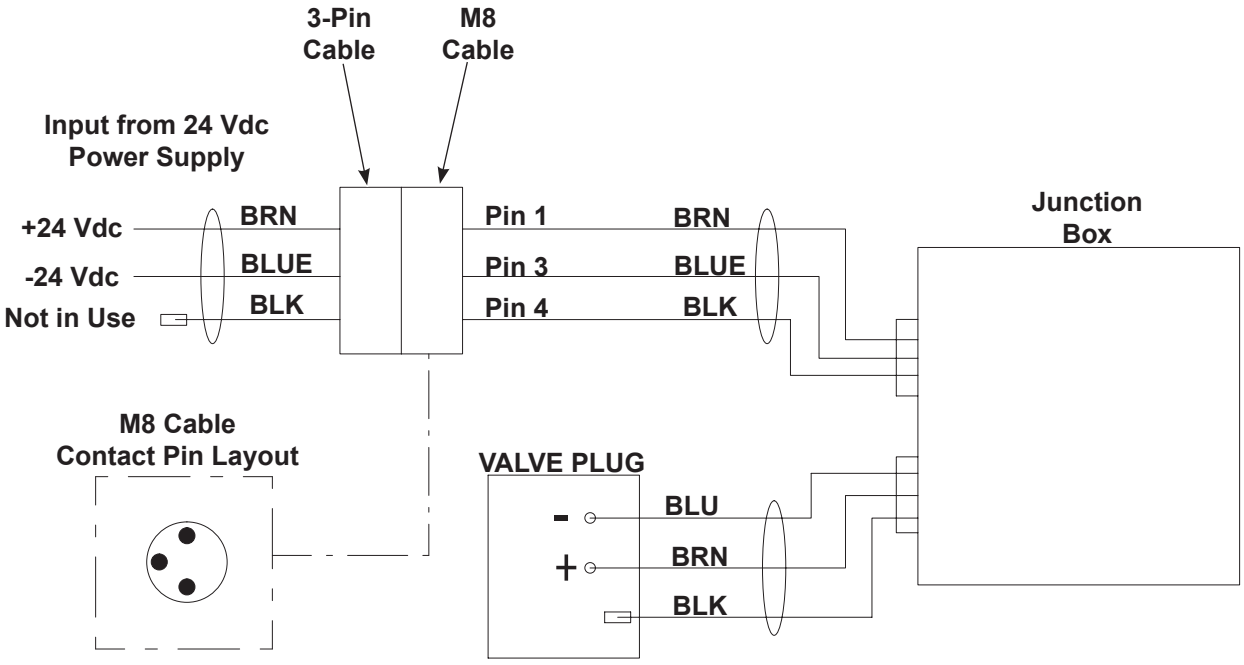

Figure 9 3-Pin Cable to 24 Vdc Power Supply Wiring Diagram for Kits without Turbine Generator

Parts

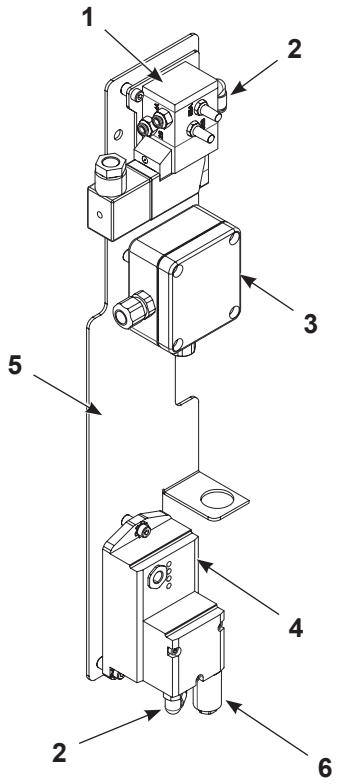

Figure 10 Prodigy Transfer Pump Upgrade Kit

Item	Part	Part	Description	Quantity	Note
—	1619498	—	KIT, HDLV, electric control, Prodigy, packaged	1	
—	—	1619748	KIT, HDLV, electric control, no generator, Prodigy, packaged	1	
1	1620576	1620576	• KIT, valve, 5 port, 2 position, NPTF, Prodigy	1	
2	972126	972126	• CONNECTOR, male, elbow, 6 mm T x ⅛ UNI	AR	A
3	- - - - - -	- - - - - -	• BOX, grey, 2.52 x 2.28, Prodigy	1	
4	1620577	—	• KIT, generator, 12 Vdc, 7.5 W, Prodigy	1	
5	- - - - - -	- - - - - -	• PLATE MOUNT, electric assembly, HDLV	1	
6	1620838	—	• SILENCER, air, high-capacity, 1/8 in.	1	
NS	972286	972286	• REDUCER, 8 mm stem x 6 mm T	2	
NS	972313	—	• TEE, union, 8 mm tube x 8 mm tube, plastic	1	
NS	982081	982081	• SCREW, button, socket, M6 x 10, zinc	2	
NS	983409	983409	• WASHER, lock, M, split, M6, steel, zinc	2	
NS	- - - - - -	- - - - - -	• KIT, HDLV, electric control, tubing	1	

NOTE: A. Kit 1619498 includes two connectors and kit 1619748 includes one connector.

AR: As Required

NS: Not Shown

Optional Cable

Optional cable for use with kit without turbine generator (Kit 1619748).

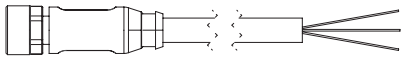

Figure 11 Optional Cable

Part	Description	Note
1619798	CABLE, M8, 3-pin to wire, 3M	
1620545	CABLE, M8, 3-pin to wire, 15M	

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