

Installation Manual

GXS Cable Accessory Kits



Description	Item Number
GXS Auxiliary Gauge Cable (0 - 10 V)	D37241017
GXS Pressure Input Cable (4 - 20 mA)	D37241019
GXS Connector Kit for 4 - 20 mA Cable	D37241023



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For return of equipment, complete the HS Forms at the end of this manual.

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Associated Publications

Publication Type	Publication Number
GXS Dry Pumping Systems Instruction Manual	M588-00-880

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1 Introduction

1.1 Scope and definitions

This manual provides installation instructions for the Auxiliary gauge cable (0 - 10 V) and Pressure input cable (4 - 20 mA) which can be used with the GXS dry pumping system.

Read this manual before you install the Auxiliary gauge cable (0 - 10 V) or Pressure input cable (4 - 20 mA). Important safety information is highlighted as WARNING and CAUTION instructions; you must obey these instructions. The use of WARNINGS and CAUTIONS is defined below.



WARNING

Warnings are given where failure to observe the instruction could result in injury or death to people.

CAUTION

Cautions are given where failure to observe the instruction could result in damage to the equipment, associated equipment and process.

Full details on how to enable and use gauges and external voltage signals are given in the main GXS pump instruction manual.

1.2 Description

The Auxiliary gauge cable (0 - 10 V) is fitted inside the GXS pump enclosure. It has a standard RJ45 connector that is accessible on the rear panel of the GXS system, as shown in the main GXS pump instruction manual.

The Auxiliary gauge cable (0 - 10 V) can be used to supply an external 0 - 10V signal to the GXS system or it can be used to run an Edwards strain gauge or Pirani gauge. For example, the auxiliary gauge can be used for PID pressure control and the 0 - 10 V external voltage signal can be used for speed control. For full details of these features, refer to the main GXS pump instruction manual.

The Pressure input cable (4 - 20 mA) is also fitted inside the GXS pump enclosure. It enables the user to connect a pressure gauge with 4 - 20 mA signal output to a connector on the rear panel of the GXS system. The connector kit for the 4 - 20 mA cable contains the mating half connector for the user to fit to their gauge. The 4 - 20 mA gauge can be used for PID pressure control.

Note: *There is only one cut-out on the rear panel of the GXS system available for a cable accessory so it is only possible to fit either the Auxiliary gauge cable (0 - 10 V) or the Pressure input cable (4 - 20 mA). It is not possible to fit both cable accessory kits simultaneously.*

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2 Installation

2.1 Installation safety



WARNING

When fitting accessories inside the GXS enclosure, ensure that you switch off the pump and lock and tag out the electrical supply before removing the enclosure panels.



WARNING

The surfaces of the dry pump, booster and spools are very hot when the GXS system is running. Allow these surfaces to cool to safe temperatures before installing accessories inside the GXS enclosure.

CAUTION

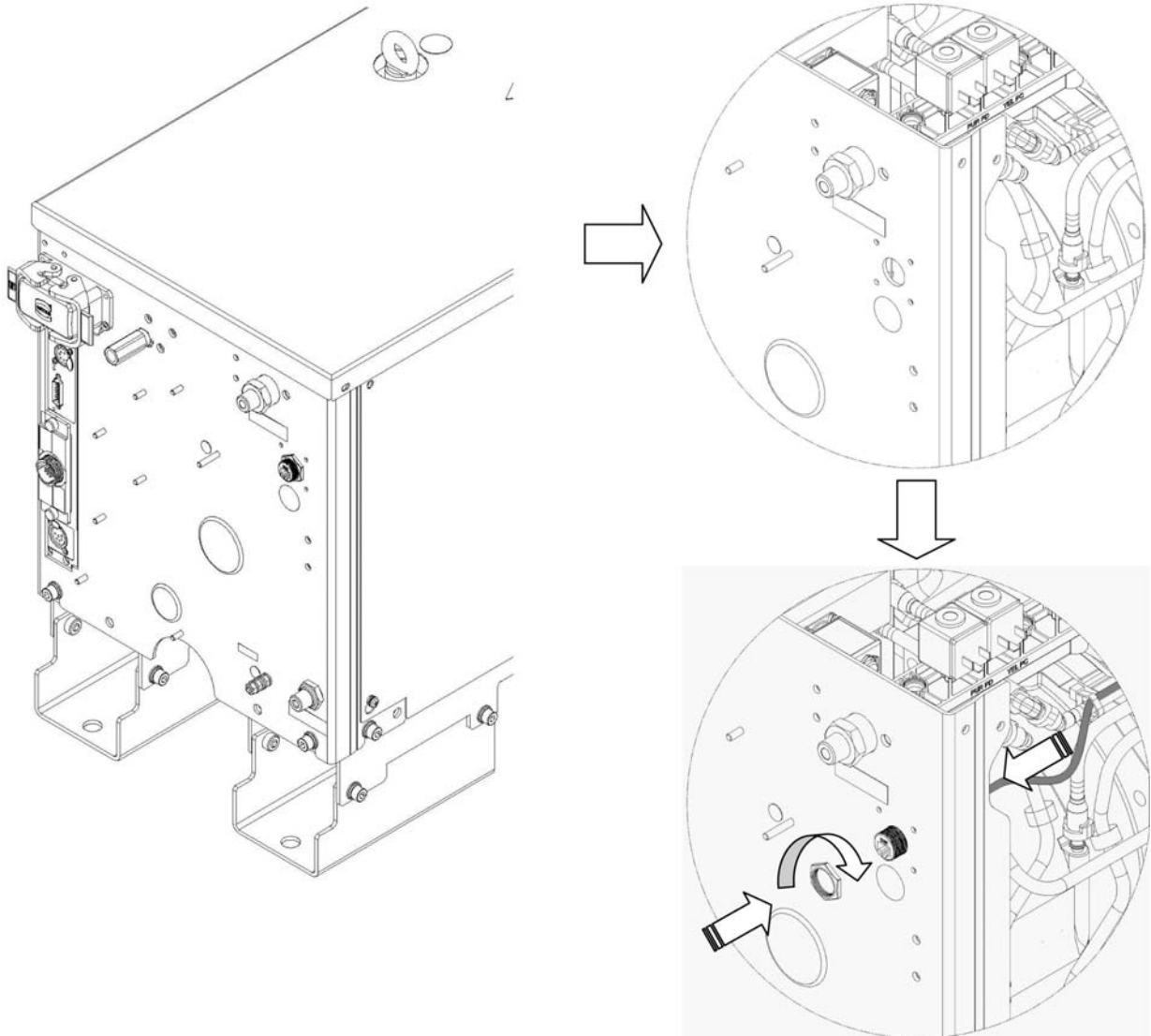
Be sure to route and secure accessory cables as shown to prevent cables from resting on hot surfaces. Accessory cables may be damaged if they touch the dry pump, booster and spools during pump operation.

The route for the accessory cable inside the GXS enclosure has been chosen carefully to ensure that the cable does not rest on hot surfaces or pass over other cables carrying mains voltages. When fitting the accessory cable, carefully follow the instructions given in the sections below. Ensure that cable ties are used as shown to keep the cable in the correct position.

2.2 Installing the cables inside the GXS enclosure

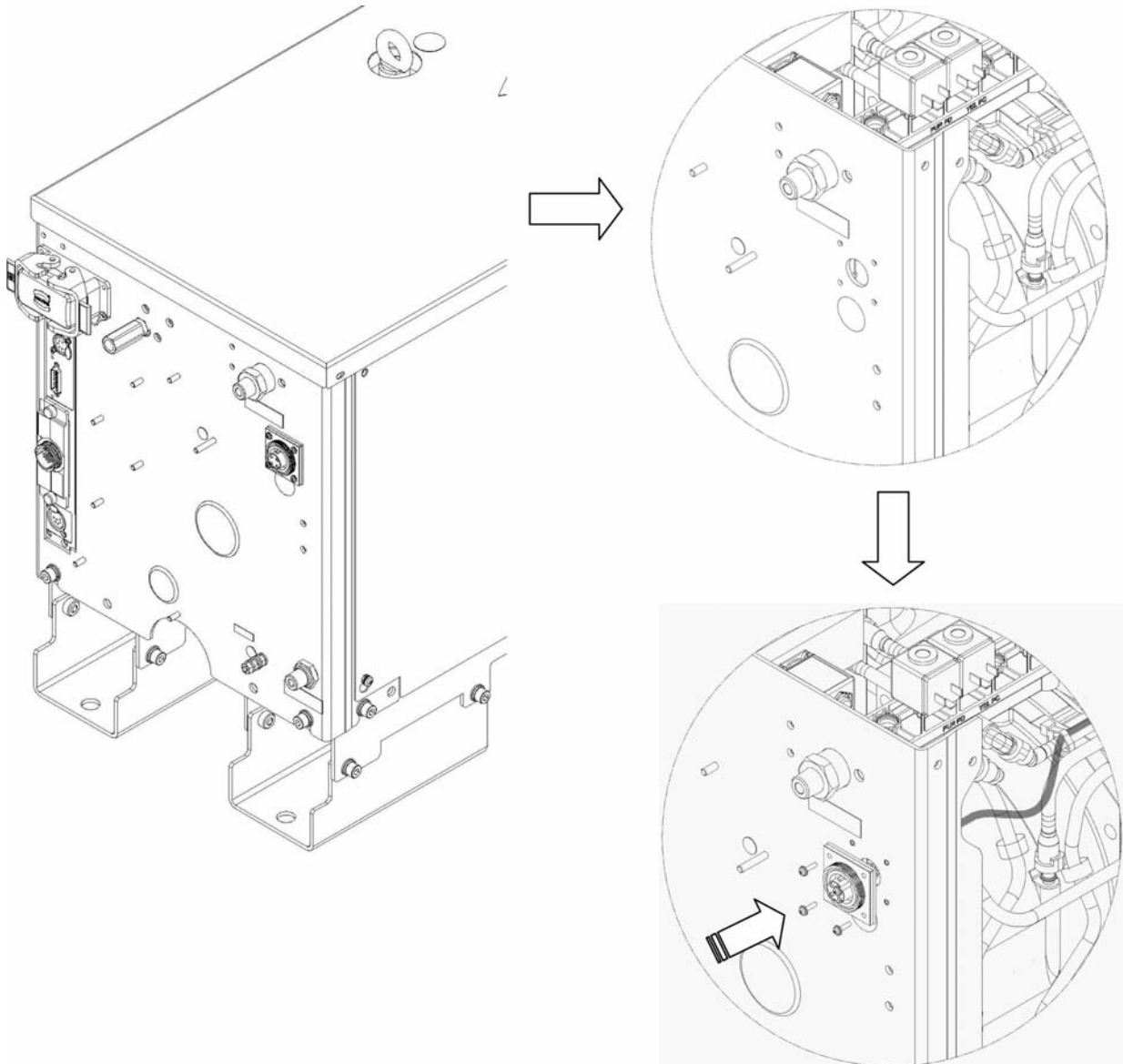
1. If the GXS system is running, shut it down.
2. Allow the system to cool sufficiently before moving on to step 3, (as an indication the system should be left for at least one hour with cooling water still connected with flow characteristics as defined in the pump instruction manual).
3. Isolate the GXS system from the electrical supply.
4. Using a suitable screw driver, remove both side panels and store them safely nearby.
5. Refer to the main GXS pump manual to identify the position of the Auxiliary gauge or Pressure input connection on the rear of the pump.
6. Remove the black rubber blind grommet that is covering the circular cut-out on the rear panel.
7. If fitting the Auxiliary gauge cable (0 - 10 V), pass the RJ45 connector through the cut-out from the inside of the pump and fit the bulkhead nut as shown in [Figure 1](#).

Figure 1 - Fitting the panel mounted connector, Auxiliary gauge cable (0 - 10 V)



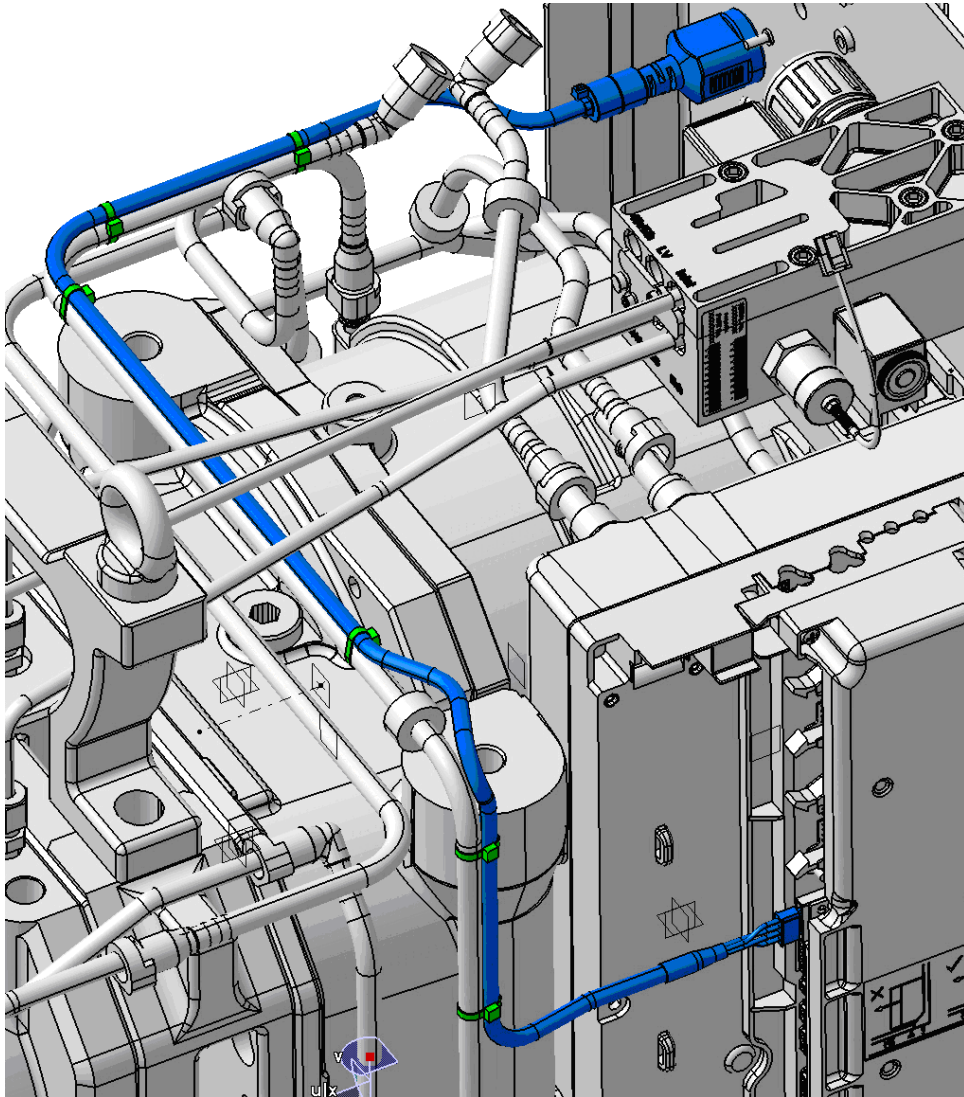
8. If fitting the Pressure input cable (4 - 20 mA), pass the cable through the cut-out from the outside and fit the 4 screws to hold the bulkhead plate in place as shown in Figure 2.

Figure 2 - Fitting the panel mounted connector, Pressure input cable (4 - 20 mA)



9. Route the cable inside the GXS enclosure as shown in Figure 3. Use cable ties to attach the cable to the water pipe.

Figure 3 - Correct routing of the accessory cable



10. Connect the 4-way connector on the other end of the accessory cable into the GXS control system. The Pressure input cable (4 - 20 mA) connects directly into the free socket on the GXS controller as show in Figure 4. The Auxiliary gauge cable (0 - 10 V) connects into the free socket on the end of a cable loom that itself goes into the GXS controller as shown in Figure 5.

Figure 4 - 4-20mA panel mounted cable GXS

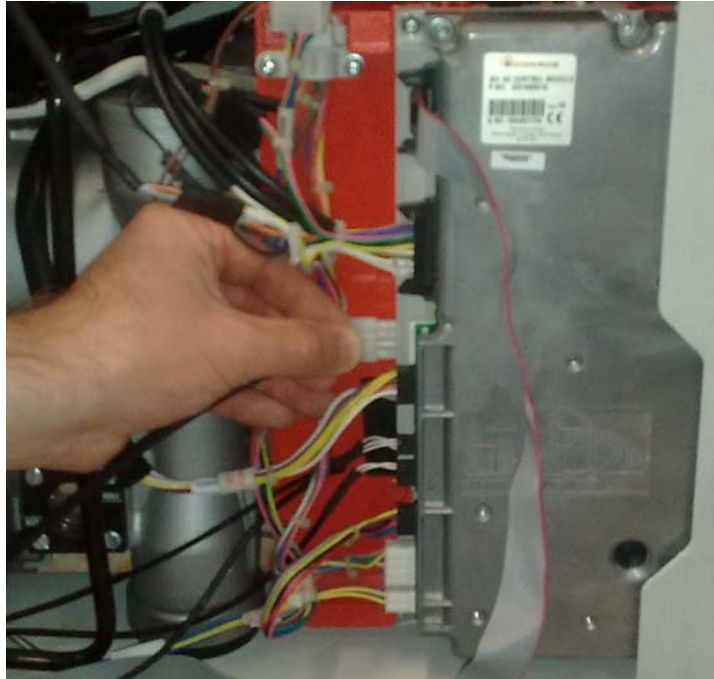
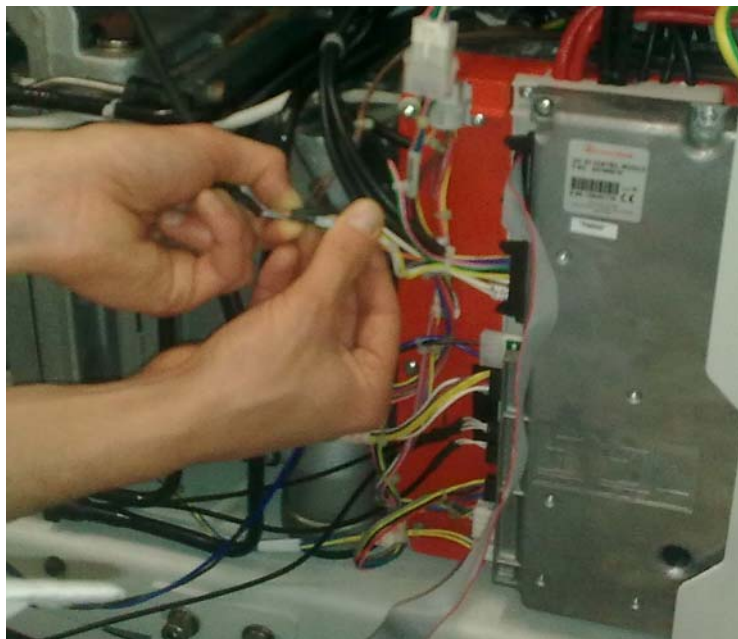


Figure 5 - Connector panel mounted cable RJ45 GXS



11. If there is any excess cable, loop it back on itself and secure it firmly with a cable tie. Ensure that it cannot come in contact with the pump surfaces.
12. Replace the covers of the GXS system.

2.3 Fitting the Connector kit for the 4 - 20 mA cable

1. Prepare the connector ready for assembly as shown in Figure 6.
2. Fit the 4 off bootlace ferrules (supplied) to the ends of the wires of your gauge.
3. Wire up the connector as shown in Figure 7, using the pin identification given in Figure 8.

Figure 6 - Connector kit for the 4 - 20 mA cable

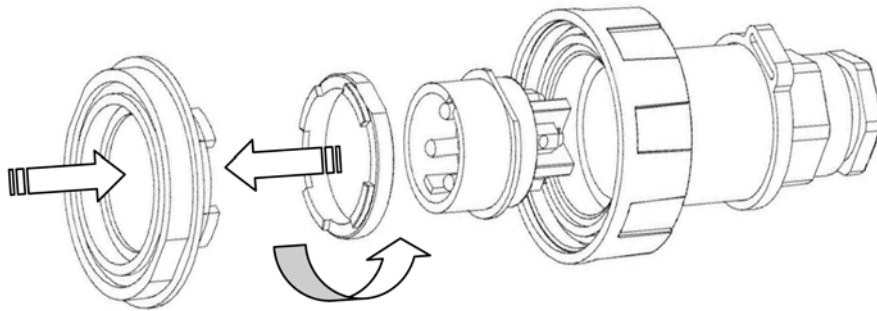
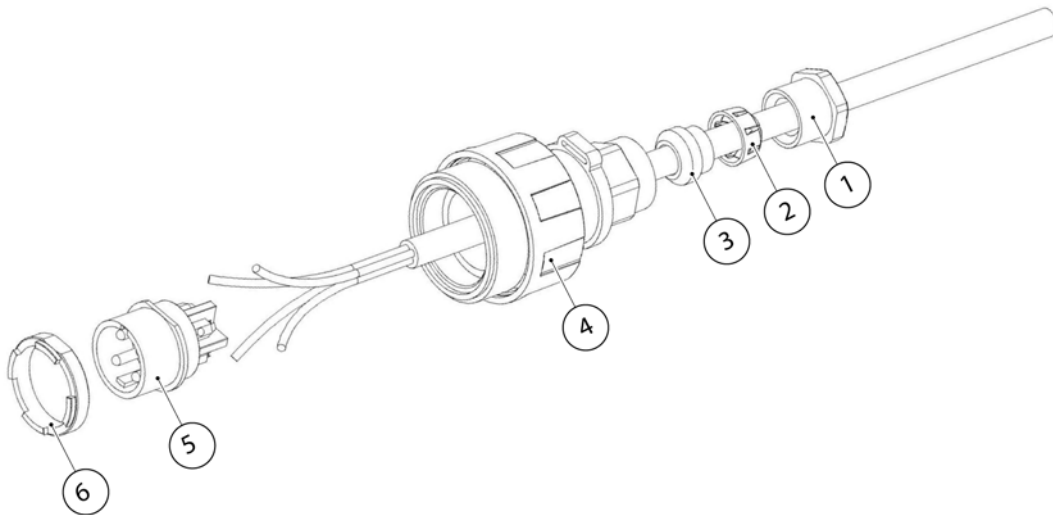
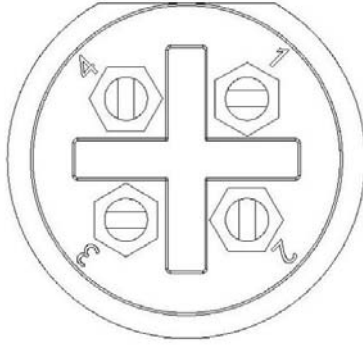



Figure 7 - Wire up the connector



Item	Identification
1	Gland Nut
2	Compressor Cage
3	Gland Seal
4	Housing Body
5	Terminal Insert
6	Locking Ring

Figure 8 - Connector pin identification



Cable Connectivity Table		
Pin	 mm	Connection
1	5	24 V
2	5	0 V
3	5	20 mA Channel 1
4	5	20 mA Channel 2

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Return the equipment or components for service

Before you send your equipment to us for service or for any other reason, you must send us a completed Declaration of Contamination of Vacuum Equipment and Components - Form HS2. The HS2 form tells us if any substances found in the equipment are hazardous, which is important for the safety of our employees and all other people involved in the service of your equipment. The hazard information also lets us select the correct procedures to service your equipment.

We provide instructions for completing the form in the Declaration of Contamination of Vacuum equipment and Components - Procedure HS1.

If you are returning a vacuum pump, note the following:

- If a pump is configured to suit the application, make a record of the configuration before returning the pump. All replacement pumps will be supplied with default factory settings.
- Do not return a pump with accessories fitted. Remove all accessories and retain them for future use.
- The instruction in the returns procedure to drain all fluids does not apply to the lubricant in pump oil reservoirs.

Download the latest documents from www.edwardsvacuum.com/HSForms/, follow the procedure in HS1, fill in the electronic HS2 form, print it, sign it, and return the signed copy to Edwards.

Note: *If we do not receive a completed HS2 form, we will not accept the return of the equipment.*

