

Even though these procedures appear simple, only qualified technicians should perform the installation and maintenance.

INSTALLATION PROCEDURES

- Ensure the bulkhead interface is machined in accordance with the manufacturer's recommendations and free from contaminants prior to fitting of the connector.
- Ensure the plug and receptacle connectors are free from contaminants prior to fitting.
- Apply a thin film of silicone compound (e.g. Novagard NG624) to the bulkhead receptacle connector 'o' seal prior to fitting.

CARE AND MAINTENANCE

Once mated, the **EX-MATE** connector requires no maintenance. When stored, the connector should be protected with suitable dust caps.

CABLE AND CONTINUITY PRESERVATION

Avoid sharp bends in cables. Cables subjected to vibration or exposed to seawater drag should be adequately clamped to prevent conductor fatigue infringing cable minimum bend radius and ultimate failure.

SPECIAL ASSEMBLIES

SEACON (europe) Ltd maintains all facilities necessary to furnish complete underwater and environmental electrical connector/cable systems, including Research & Development, Engineering, Manufacturing, Quality Control and Pressure Testing. As well as supplying our standard 'off-the-shelf' items, we have the capability to design and manufacture SPECIAL CUSTOMIZED CONNECTORS AND CABLE ASSEMBLIES to suit your individual needs.

CONNECTOR MATING

The **EX-MATE** connector uses a series of three o-ring style seals molded into the bores of the CCP / BCP connector which form a pressure tight and electrically insulative barrier when the connector is mated.

The pin contact on the BCR / CCR has a molded and bonded rubber boot along a portion of its length which these seals bear on, completing the seal system.

With the seals being formed from a rubber compound, the behavior of these seals will be determined by their lubrication. If the connectors are not properly lubricated prior to mating the rubber surfaces tend to grip onto one another and damage can be caused to these surfaces. The connector will not function properly if the seals are not adequately lubricated prior to mating. The advised lubricant is Novagard NG624 silicone grease which is commonly available in tube form. Spray grease is not advised since some of the propellant can form a conductive layer which leads to issues with low Insulation resistance.

Water displacement products, thinners and mineral oil lubricants should not be used as they can cause degradation of the rubber compounds. For further advice on lubricants other than NG624 please contact the factory.



Fig. 1



Fig. 2

The grease should be wiped across the face of the connector (Fig. 2), this action naturally deposits a suitable amount of grease within each of the connector bores. The aim is not to fill the bores with grease but just to have the top portion of the bore filled. This grease will be drawn down the bore as the pin is mated.

The grease will attract dirt and debris if left exposed for a period and it is advised that the lubrication is done immediately prior to mating.



Fig. 3



Fig. 4

Align the key with the keyway down the shell of the BCR / CCR (Fig. 4) and slide the connector plug into the socket bore until the threads of the connectors come into contact (Fig. 5).



Fig. 5



Fig. 6

Ensuring that no rotation is transferred to the BCR / CCR (Fig. 6) connector, tighten the engaging nut to draw the connectors together. There is a definite stop once the connectors are fully mated and this ensures that only hand tight is needed to mate the connectors fully. A strap wrench can be employed on the very high density connectors to give increased purchase during the initial engagement if difficulty is found with the mating.

Prior to de-mating a pair of connectors following deployment the outer surface should be free from surface water, dirt or debris. Ensure that the power is isolated prior to de-mating as not only is this a safety issue due to the exposed electrical contacts, it can cause significant damage to the electrical contacts if they are energised whilst mated / de-mated. It is not necessary to pull on the CCP / CCR cable / hose during the de-mating since the engaging nut will 'jack' the connectors apart. After ensuring that the connectors are free of debris or damage and prior to deployment fit the properly lubricated dummy connectors to ensure trouble free operation.