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DESCO Air Hat Four Wire Communications Instructions

The DESCO Air Hat now comes equipped with a new speaker cup, which incorporates the binding posts for standard two-wire communications, and a port for the installation of a Marsh Marine style plug assembly. This port comes plugged from the factory unless the Air Hat is ordered with the Four-Wire Communications Pigtail option. The customer can install the four wire plug assembly at a later time with parts DESCO can provide. The customer is responsible for providing the microphone.



Instructions for connection of a four-wire communications equipped Air Hat to customer's umbilical.

If your new Air Hat was ordered with the Four Wire Communications Plug assembly, the helmet is shipped without any wiring connections made to the speaker. This allows the customer to match the connections in the Air Hat to the umbilical communications line. The customer should check which wires are paired to the microphone and to the speaker on the umbilical communications line. The wire pair going to the speaker should be shortened so they can reach the binding post ends without any strain on them. Using ring terminals or tinned ends connect the wires to the binding posts. Make sure the insulators are installed on the ring terminals as a short circuit could result if bare terminals contact the helmet or each other. The microphone wires can be cut to length according to the placement of the microphone, which is determined according to the customer's location preference.

Instructions for installing the four-wire communications assembly as a retrofit.

Remove the port plug and clean and inspect the threads. Check the fit of the bulkhead fitting by inserting the fitting as far as possible by hand. It should easily engage the threads and turn in about 1/3 of the way. Remove the fitting and mix a small amount of fast set two-part epoxy. Apply the epoxy to the threads on the fitting and insert into the port. Tighten the fitting to approximately 3/4 of the length of the threads. Allow the epoxy to set per the manufacturers recommendations. Slip the compression nut and Plastic ferrules provided onto the plug pigtail. The nut and ferrules should be placed so as to leave enough of the plug out to connect to the umbilical without straining. Approximate the final location of the plug in relation to the Telephone Cup (factory length is 11" from face of cup to tip of plug) and strip off the excess cable sheathing, leaving enough to pass through the bulkhead fitting into the helmet. Insert the cable through the bulkhead fitting. If the cable resists passing through apply soapy water or silicone spray to the cable. Also, the sheathing of the cable can be worked towards the bare wire ends of the cable to reduce the diameter to aid in installation. Tighten the compression nut. Follow the connection instructions above to complete the installation. Bench test the installation before placing the Air "in service".