

PRODUCT ADVISORY NOTICE

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To: All Customers, Sales Representatives and Distributors
Date: October 30, 2009
Subject: 628907 Connector Change

Grayhill has approved a second vendor for the standard .050" pitch connector used on the standard Grayhill Optical Encoders and many of the custom part numbers. Currently, AMP part number 7-215083-6 is the only approved source and has been since 1996. Adding the second vendor keeps with Grayhill's philosophy of having a minimum of two approved vendors for every piece part, wherever feasible. The connectors interface properly with each other's mating connectors. Therefore, no changes are necessary to the mating connector in the customer's application.

The two approved vendors for the standard .050" pitch connector used on Grayhill Optical Encoders are now as follows:

| Vendor Name | Vendor Part Number |
|-------------|--------------------|
| AMP (Tyco) | 7-215083-6 |
| ITW Pancon | 39-06-SN-A-A |

As always, Grayhill has performed numerous tests to ensure that the second source connector meets the necessary criteria for a properly functioning encoder and does not cause any general loss in performance against the current Amp connector. A summary of the testing is below.

Testing Summary – Round 1

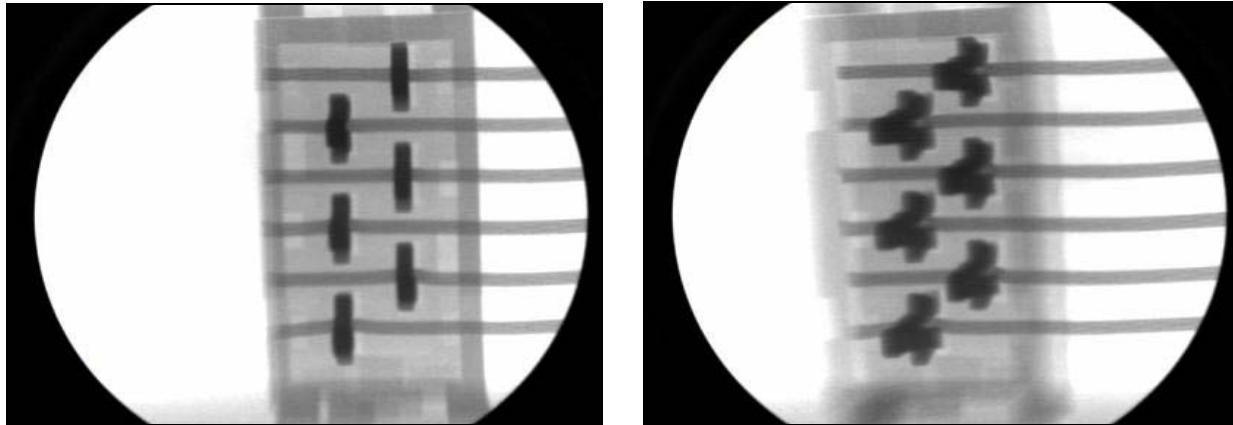
Scope: General testing to ensure that the connector functioned properly in the assembly.

| | 6 Samples |
|-------------------------------|-----------|
| Engineering Oscilloscope Test | Pass |
| F.A.T.E Testing | Pass |
| Cold Cycle Testing | Pass |
| Heat Cycle Testing | Pass |
| X-Ray Testing | Pass |
| Mating Connector Testing | Pass |



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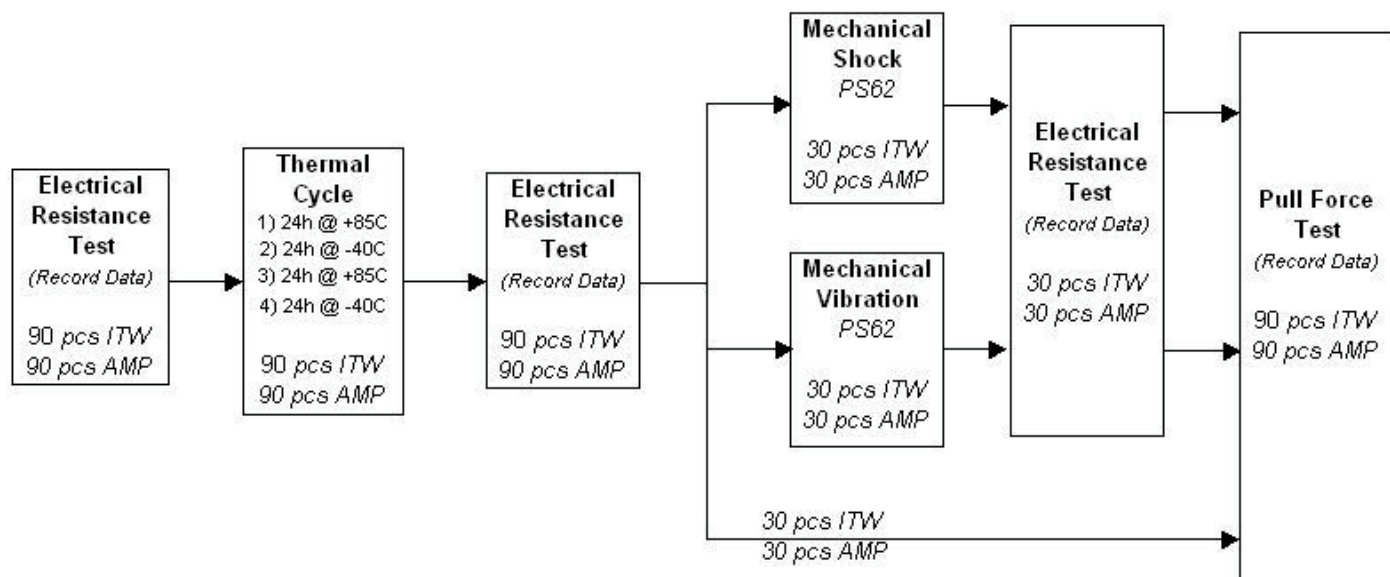
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Sample X-Ray Images of the ITW Pancon connector assembled to a cable.

Testing Summary – Round 2

Scope: To perform a detailed analysis of the ITW connector performance through environmental testing versus the existing AMP connector.



Test Map for 'Round 2' testing

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| | Pull Force (lbs) | | | | | Electrical Resistance through all tests (Ohms, including 6" Ribbon Cable) | | | | |
|-------------------------------------|------------------|---------|--------------------|-----|-----|--|---------|--------------------|-----|-----|
| | # Samples | Average | Standard Deviation | Max | Min | # Samples | Average | Standard Deviation | Max | Min |
| Pancon - Mechanical Shock Group | 30 | 25.77 | 1.74 | 29 | 22 | 30 | 0.17 | 0.10 | 0.5 | 0.1 |
| Pancon - Mechanical Vibration Group | 30 | 25.97 | 2.50 | 30 | 22 | 30 | 0.21 | 0.10 | 0.7 | 0.1 |
| Pancon - Thermal Cycle Only Group | 30 | 25.87 | 2.10 | 30 | 22 | 30 | 0.17 | 0.06 | 0.3 | 0.1 |
| AMP - Mechanical Shock Group | 30 | 25.63 | 1.38 | 28 | 23 | 30 | 0.25 | 0.14 | 0.7 | 0.1 |
| AMP - Mechanical Vibration Group | 30 | 25.70 | 0.84 | 27 | 24 | 30 | 0.22 | 0.09 | 0.5 | 0.1 |
| AMP - Thermal Cycle Only Group | 30 | 25.17 | 1.26 | 28 | 23 | 30 | 0.19 | 0.08 | 0.5 | 0.1 |

Results from 'Round 2' testing

The following part numbers have been affected:

| | | | |
|----------------|---------------|---------------|----------------|
| 61CY22116 | 62A11-01-030C | 62A15-02-025C | 62A22-02-055C |
| 61L315-L5-040C | 62A11-01-035C | 62A15-02-030C | 62A22-02-060C |
| 61L507-N5-040C | 62A11-01-040C | 62A15-02-040C | 62A22-02-080C |
| 61L515-L5-020C | 62A11-01-045C | 62A15-02-045C | 62A22-02-090C |
| 61L515-M0-040C | 62A11-01-050C | 62A15-02-050C | 62A22-02-100C |
| 61L515-M0-060C | 62A11-01-060C | 62A15-02-060C | 62A22-02-120C |
| 61L515-M5-020C | 62A11-01-070C | 62A15-02-080C | 62A22-02-130C |
| 61L515-M5-040C | 62A11-01-100C | 62A15-02-100C | 62A22-02-135C |
| 61L515-M5-060C | 62A11-01-120C | 62A15-02-120C | 62A22-02-140C |
| 61L515-N0-040C | 62A11-02-020C | 62A18-02-020C | 62A22-02-160C |
| 61L515-N0-060C | 62A11-02-030C | 62A18-02-060C | 62A22-02-240C |
| 61L515-N5-040C | 62A11-02-035C | 62A22-01-020C | 62A30-02-020C |
| 61L515-N5-060C | 62A11-02-040C | 62A22-01-025C | 62A30-02-050C |
| 61LY15002 | 62A11-02-050C | 62A22-01-040C | 62AG22-01-040C |
| 61LY15003 | 62A11-02-055C | 62A22-01-050C | 62AG22-02-040C |
| 61LY18001 | 62A11-02-060C | 62A22-01-060C | 62AGY18003 |
| 6299142 | 62A11-02-080C | 62A22-01-100C | 62AGY18004 |
| 6299198 | 62A11-02-100C | 62A22-01-120C | 62AGY22004 |
| 62A01-01-020C | 62A11-02-120C | 62A22-01-240C | 62AGY22009 |
| 62A01-01-060C | 62A11-02-240C | 62A22-02-020C | 62AGY22013 |
| 62A01-02-020C | 62A15-01-020C | 62A22-02-025C | 62AGY22014 |
| 62A01-02-030C | 62A15-01-030C | 62A22-02-030C | 62AY01001 |
| 62A01-02-050C | 62A15-01-050C | 62A22-02-035C | 62AY01004 |
| 62A03-01-035C | 62A15-01-060C | 62A22-02-040C | 62AY01005 |
| 62A11-01-020C | 62A15-02-020C | 62A22-02-050C | 62AY11003 |



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| | | | |
|-------------|---------------|---------------|---------------|
| 62AY11010 | 62AY22047 | 62D11-02-020C | 62N11-060C |
| 62AY11016 | 62AY22049 | 62D11-02-040C | 62N11-065C |
| 62AY11026 | 62AY22051 | 62D11-02-060C | 62N11-070C |
| 62AY11041 | 62AY22053 | 62D11-02-070C | 62N15-080C |
| 62AY11046 | 62AY22055 | 62D15-02-020C | 62N22-020C |
| 62AY11048 | 62AY22057 | 62D18-02-020C | 62N30-020C |
| 62AY11076 | 62AY22058 | 62D22-01-040C | 62S11-H0-020C |
| 62AY11078 | 62AY22059 | 62D22-01-060C | 62S11-H0-035C |
| 62AY11084 | 62AY22060 | 62D22-02-020C | 62S11-H9-020C |
| 62AY11093 | 62AY22061 | 62D22-02-025C | 62S11-H9-060C |
| 62AY11099 | 62AY22065 | 62D22-02-035C | 62S11-L0-020C |
| 62AY11120 | 62AY22073 | 62D22-02-040C | 62S11-L0-060C |
| 62AY11135 | 62AY22076 | 62D22-02-060C | 62S11-L4-020C |
| 62AY11140 | 62AY22080 | 62D22-02-080C | 62S11-L4-040C |
| 62AY11141 | 62AY22081 | 62D30-02-020C | 62S11-L4-060C |
| 62AY11144 | 62AY22082 | 62D30-02-030C | 62S11-L4-080C |
| 62AY11150 | 62AY22084 | 62D30-02-040C | 62S11-L5-020C |
| 62AY11156 | 62AY22090 | 62D30-02-060C | 62S11-L5-035C |
| 62AY11168 | 62AY22092 | 62DY11001 | 62S11-L5-040C |
| 62AY11176 | 62AY22094 | 62DY11002 | 62S11-L5-060C |
| 62AY11177 | 62AY22099 | 62DY11003 | 62S11-L9-020C |
| 62AY15001 | 62AY22104 | 62DY11004 | 62S11-L9-040C |
| 62AY15003 | 62AY22106 | 62DY11007 | 62S11-M0-020C |
| 62AY15009 | 62AY22109 | 62DY11008 | 62S11-M0-050C |
| 62AY15014 | 62AY22111 | 62DY11014 | 62S11-M0-060C |
| 62AY15018 | 62AY22113 | 62DY11022 | 62S11-M5-020C |
| 62AY15027 | 62AY22125 | 62DY11026 | 62S11-M5-030C |
| 62AY15034 | 62AY22126 | 62DY22001 | 62S11-M5-050C |
| 62AY15038 | 62AY22130 | 62F01-02-020C | 62S11-M5-055C |
| 62AY15043 | 62AY22131 | 62F11-02-020C | 62S11-M5-060C |
| 62AY15047 | 62AY22139 | 62F11-02-040C | 62S11-M5-080C |
| 62AY15049 | 62AY22142 | 62F11-02-060C | 62S11-M5-100C |
| 62AY15051 | 62AY22145 | 62F15-02-060C | 62S11-M9-020C |
| 62AY15054 | 62AY22146 | 62F22-02-020C | 62S11-M9-030C |
| 62AY15055 | 62AY22151 | 62HSY22008 | 62S11-M9-050C |
| 62AY22002 | 62AY22156 | 62HSY22010 | 62S11-M9-100C |
| 62AY22005 | 62AY22161 | 62HSY22014 | 62S11-N0-020C |
| 62AY22007 | 62AY22162 | 62HSY22017 | 62S11-N0-040C |
| 62AY22008 | 62AY22169 | 62HSY22018 | 62S11-N0-050C |
| 62AY22008HT | 62AY22171 | 62HSY22021 | 62S11-N2-030C |
| 62AY22015 | 62AY22173 | 62LY22001 | 62S11-N2-040C |
| 62AY22023 | 62CY2222008 | 62LY22004 | 62S11-N5-040C |
| 62AY22038 | 62CY2222009 | 62N11-020C | 62S11-N5-050C |
| 62AY22042 | 62CY2222046 | 62N11-040C | 62S11-N5-060C |
| 62AY22044 | 62D11-01-020C | 62N11-050C | 62S11-N9-060C |



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|---------------|---------------|-----------|----------------|-----------|
| 62S15-H0-020C | 62S22-L0-060C | 62SY11068 | 62SY45004 | 62VY15007 |
| 62S15-H0-040C | 62S22-L4-020C | 62SY11071 | 62T22-H10-020C | 62VY15008 |
| 62S15-H9-020C | 62S22-L4-030C | 62SY11078 | 62T22-L7-020C | 62VY15011 |
| 62S15-H9-040C | 62S22-L4-050C | 62SY11079 | 62T22-M0-060C | 62VY15013 |
| 62S15-H9-060C | 62S22-L4-060C | 62SY11080 | 62T22-M10-040C | 62VY15015 |
| 62S15-L4-020C | 62S22-L5-020C | 62SY11081 | 62T22-M7-020C | 62VY18001 |
| 62S15-L4-040C | 62S22-L5-030C | 62SY15005 | 62V08-02-040C | 62VY22003 |
| 62S15-L4-060C | 62S22-L5-040C | 62SY15017 | 62V11-01-060C | 62VY30002 |
| 62S15-L4-120C | 62S22-L5-060C | 62SY15020 | 62V11-01-110C | |
| 62S15-L5-020C | 62S22-L5-140C | 62SY18008 | 62V11-02-020C | |
| 62S15-L9-020C | 62S22-M0-020C | 62SY22001 | 62V11-02-040C | |
| 62S15-M0-020C | 62S22-M0-030C | 62SY22005 | 62V11-02-050C | |
| 62S15-M0-030C | 62S22-M0-050C | 62SY22013 | 62V11-02-055C | |
| 62S15-M0-060C | 62S22-M0-060C | 62SY22014 | 62V11-02-060C | |
| 62S15-M5-020C | 62S22-M5-020C | 62SY22018 | 62V11-02-100C | |
| 62S15-M5-030C | 62S22-M5-030C | 62SY22019 | 62V11-02-110C | |
| 62S15-M5-040C | 62S22-M5-040C | 62SY22020 | 62V15-01-020C | |
| 62S15-M5-060C | 62S22-M5-050C | 62SY22021 | 62V15-01-060C | |
| 62S15-M9-020C | 62S22-M5-060C | 62SY22026 | 62V15-01-120C | |
| 62S15-M9-050C | 62S22-M9-020C | 62SY22027 | 62V15-02-020C | |
| 62S15-N0-020C | 62S22-M9-030C | 62SY22029 | 62V15-02-035C | |
| 62S15-N0-040C | 62S22-M9-040C | 62SY22045 | 62V15-02-040C | |
| 62S15-N0-060C | 62S22-M9-060C | 62SY22046 | 62V15-02-080C | |
| 62S15-N4-020C | 62S30-H0-020C | 62SY22053 | 62V15-02-180C | |
| 62S18-H9-020C | 62S30-L4-060C | 62SY22059 | 62V18-02-020C | |
| 62S18-H9-040C | 62S30-L9-080C | 62SY22060 | 62V22-01-050C | |
| 62S18-L5-020C | 62S30-M0-030C | 62SY22061 | 62V22-02-020C | |
| 62S18-L5-040C | 62S30-M0-200C | 62SY22062 | 62V22-02-030C | |
| 62S18-L9-020C | 62S30-M5-040C | 62SY22064 | 62V22-02-040C | |
| 62S18-M5-020C | 62S45-H9-020C | 62SY22072 | 62V22-02-050C | |
| 62S18-M5-040C | 62S45-H9-030C | 62SY22073 | 62V22-02-060C | |
| 62S18-M5-060C | 62S45-M0-030C | 62SY22076 | 62V22-02-160C | |
| 62S18-M5-090C | 62S45-M5-040C | 62SY22078 | 62V30-02-020C | |
| 62S18-M9-020C | 62S45-M5-050C | 62SY22093 | 62V30-02-030C | |
| 62S22-H0-020C | 62SY11002 | 62SY22094 | 62V30-02-040C | |
| 62S22-H0-040C | 62SY11016 | 62SY22096 | 62V30-02-080C | |
| 62S22-H9-020C | 62SY11045 | 62SY22097 | 62VY11003 | |
| 62S22-H9-030C | 62SY11046 | 62SY22098 | 62VY11013 | |
| 62S22-H9-060C | 62SY11052 | 62SY22111 | 62VY11016 | |
| 62S22-L0-020C | 62SY11063 | 62SY39001 | 62VY15001 | |
| 62S22-L0-050C | 62SY11066 | 62SY45003 | 62VY15002 | |

Please contact your Grayhill, Inc. sales associate for further information.



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