|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | | | | |
| **\*DATE** |  | **\*QUANTITY TESTED** |  |
| **\*ORGANIZATION** |  | **\*PART NUMBER** |  |
| \*HEAT TREAT LOCATION |  | **\*PART NAME** |  |
| **\*NAME OF LABORATORY** |  | **\*Batch Trace Number** |  |
| **\*MATERIAL SUPPLIER** |  | **\*Tier 1 PO Number** |  |
| **\*SUPPLIER VENDOR CODE** . | |  | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Heat Treat - Carburize and Carbonitride per**  **TPS 301 (Rev. M, 11-15-21). These additional requirements also apply to 8355701** | SPECIFICATION / LIMITS (min/max) | | SUPPLIER TEST RESULTS (DATA) | **OK** | **NOT OK** |
| \*Per Print and Spec: Effective Case Depth by microhardness traverse per 4.3.  Other methods can be utilized as stated in section 4.3.2 and 4.3.3 from Allison Transmission (.4% carbon, 50HRC and Microstructure appearance. |  |  |  |  |  |
| \*Per Print: Case Hardness. |  |  |  |  |  |
| \*Per Print: Core Hardness. |  |  |  |  |  |
| \*Per Spec: 1.1.1 and 4.2 (8355701 page 2) Microstructure:  Describe microconstituents and/or include photo with dictation. Insert Martenstic microstrucure Photo below. |  | |  |  |  |
| \*Per Spec: 4.2.1.3/4.2.1.4 Intergranular Oxidation (IGO)/ Non-martensitic Transformation Products (NMTP): Based on case depth per Spec. |  |  |  |  |  |
| \*Per Spec: 4.2.1.5 Decarburization: Total decarburization is not acceptable. |  | |  |  |  |
| \*Per Spec (at PPAP and Annually) 3.2.2.7 Surface Carbon Concentration:  Average of first .002 to .006” depth. |  |  |  |  |  |
| \*Per Spec: 1.1.1 and 4.2.1.1 Network carbides: No semi- or continuous carbide networks allowed. |  | |  |  |  |
| \*Per Spec: 4.2.1.1 Retained Austenite:  Must meet surface hardness requirement. |  | |  |  |  |
| \*Heat Treat Metallurgist to review and confirm part preparation per 3.1; carburizing/carbonitriding temperatures per 3.2.1; atmosphere controls per 3.2.2; quenching parameters per 3.3, tempering parameters per 3.5 |  | |  |  |  |

INSERT PHOTO OF MARTENSITIC MICROSTRUCTURE HERE

\*Follow CQI-9 for frequency check requirements.

Microstructure checks changed from “every batch” CQI-9 Revision 3 to “once per day per furnace” on CQI-9 Revision 4.