

## Important Note:

Each supplier wishing to do business with Tenneco is required to meet the guidelines indicated in this Global Purchasing Management Manual, as well as the respective region for which business transpires.

Each supplier is required to review this manual at least once per year.

## Table of Contents and Revisions

Last updated 02-28-2017

Latest Changes Highlighted. Date Format: mm/dd/yyyy

Section	Content	Creation Date	Revision Letter	Revision Date	Revision
0.0	Link Sheet	5/31/2010	A	5/31/2010	Added
1.0	Introduction	1/1/2004	N/A	N/A	N/A
1.1	Introduction Cover Letter	1/1/2004	G	10/31/2015	Signed by Executive Global Purchasing Directors
2.0	Organization	1/1/2004	N/A	N/A	Created Heading for Section
2.1	History	1/1/2004	E	10/31/2015	Revenue and Footprint revision.
2.2	Quality Policy/Mission Statement	1/1/2004	B	12/22/2005	NA Manual Integrated into the Global Manual
2.3	Vision Statement	1/1/2004	B	12/22/2005	NA Manual Integrated into the Global Manual
2.4	Headquarter Locations	1/1/2004	B	12/22/2005	NA Manual Integrated into the Global Manual
2.5	Worldwide Location	1/1/2004	B	12/22/2005	NA Manual Integrated into the Global Manual
3.0	Purchasing	1/1/2004	N/A	N/A	Created Heading for Section
3.1	Organizational Philosophy	1/1/2004	B	12/22/2005	NA Manual Integrated into the Global Manual
3.2	Operations Philosophy	1/1/2004	C	3/31/2011	Added recommendation to practice 5S and Lean methods.
3.3	Ethics	1/1/2004	B	06/30/2014	Revised Code of Conduct Reference
3.4	Supplier Criteria	1/1/2004	C	3/31/2011	Added VA/VE Supplier

					Suggestion Form link.
3.5	Initial Assessment	1/1/2004	C	5/31/2010	Added supplier must demonstrate compliance to the manual
3.6	Request for Quote (RFQ)	1/1/2004	B	12/22/2005	NA Manual Integrated into the Global Manual
3.7	Blanket Purchase Orders	1/1/2004	C	5/31/2010	New section
3.8	Blanket Shipping Releases	1/1/2004	B	12/22/2005	NA Manual Integrated into the Global Manual
3.9	Service Orders	1/1/2004	B	12/22/2005	NA Manual Integrated into the Global Manual
3.10	Fab/ Raw Authorizations	1/1/2004	E	10/31/2015	Added final note on PCN process for deviations.
3.10.1	Contingency Plan Requirements	4/30/2013	A	4/30/2013	New Addition
3.11	Business Review Meetings	1/1/2004	B	12/22/2005	NA Manual Integrated into the Global Manual
3.12	Supply Agreements	1/1/2004	B	12/22/2005	NA Manual Integrated into the Global Manual
3.13	Prices	1/1/2004	C	5/31/2010	Added reference to PPAP process
3.14	Finance	1/1/2004	B	12/22/2005	NA Manual Integrated into the Global Manual
3.15	Payment/ Terms/Conditions	1/1/2004	D	06/30/2014	Links Directly to <a href="http://tsp.tenneco.com">tsp.tenneco.com</a>
4.0	Supplier Performance Requirements	1/1/2004	N/A	N/A	Created Heading for Section
4.1	Quality Systems	11/27/2007	G	10/31/2015	Added waiver note for small automotive sales suppliers.
4.1.1	Engineering Design Rules and CAD Requirements	5/31/2010	A	5/31/2010	Added.
4.2	Advanced Product Quality Planning (APQP)	1/1/2004	D	10/31/2015	Entire re-write – please read.
4.2.1	Feasibility	1/1/2004	D	10/31/2015	Added Team Feasibility Report must be added to quote package.
4.2.2	Packaging Planning	1/1/2004	B	5/31/2010	Added approval by materials group
4.2.3	Launch Containment Requirements	1/1/2004	B	4/30/2013	Added clarification of “mandatory process”



4.2.3.1	Launch Containment Process	1/1/2004	E	10/31/2015	Added supplier must submit containment plan with inspection criteria in the designated Titan C-folder prior to PPAP submission.
4.2.3.2	Launch Containment Exit	1/1/2004	B	5/31/2010	Separated process from exit criteria, deleted old section
4.2.4	Capacity Verification	1/1/2004	D	4/30/2013	Replaced Run@ Rate – Entire re-write.
4.3	Supplier Production Part Approval Process (PPAP)	1/1/2004	E	5/31/2010	Moved from 4.3.1 PPAP Requirements, reworded to reflect current requirements, removed general directions, and referenced AIAG documents, added Tenneco specific requirements.
4.3.1	PPAP Submission	1/1/2004	D	10/31/2015	Various changes – please read thoroughly.
4.3.1.1	Sample Part Submission	1/1/2004	B	5/31/2010	Added link to generic label to identify PPAP samples; separated from section 4.3.1 General PPAP Requirements. Documents are to be placed in the individual assigned C-folders (Collaboration folders). Composite or “.zip” is not accepted.
4.3.2.1	Design Records	1/1/2004	B	5/31/2010	Removed reference to contact buyer for drawings, added reference to obtain records through TITAN, added section reference to special characteristics
4.3.2.2	Engineering Change Documents	1/1/2004	B	5/31/2010	Removed generic requirement, added Tenneco requirement to obtain Engineering approval
4.3.2.3	Engineering Approval	1/1/2004	B	5/31/2010	Added a requirement for capability studies for Engineering approval of deviations.
4.3.2.4	DFMEA (Design Failure Mode Effects Analysis)	1/1/2004	C	10/31/2015	Total re-write – please read thoroughly.
4.3.2.5	Process Flow Diagram	1/1/2004	C	10/31/2015	Total re-write – please read thoroughly.



4.3.2.6	PFMEA (Process Failure Mode Effects Analysis)	1/1/2004	D	10/31/2015	Total re-write – please read thoroughly.
4.3.2.7	Dimensional Results	1/1/2004	C	10/31/2015	Added balloon drawing requirements section.
4.3.2.8	Material/Performance Test Results	1/1/2004	C	10/31/2015	Total re-write – please read thoroughly.
4.3.2.9	Capability Studies	1/1/2004	E	10/31/2015	Total re-write – please read thoroughly.
4.3.2.10	Measurement Systems Analysis	1/1/2004	D	10/31/2015	Total re-write – please read thoroughly.
4.3.2.11	Qualified Laboratory Documentation	1/1/2004	B	5/31/2010	Reworded.
4.3.2.12	Control Plans	1/1/2004	B	5/31/2010	Removed specific level of TS and added “latest version”, added annual part validation to be on Control Plan. Added requirement to identify “family parts”
4.3.2.13	Part Submission Warrant (PSW)	1/1/2004	B	5/31/2010	Reworded
4.3.2.14	Appearance Approval Report	1/1/2004	B	05/31/2010	Reworded
4.3.2.15	Sample Production Parts	1/1/2004	B	10/31/2015	Added PPAP samples must arrive at the Tenneco Facility on or before PPAP due date.
4.3.2.16	Master Sample	1/1/2004	B	5/31/2010	Reworded, added that exceptions to Master Sample retention must be included in PPAP package.
4.3.2.17	Checking Aids	1/1/2004	B	5/31/2010	Separated section.
4.3.2.18	Customer Specific Requirements (Customer and End User)	1/1/2004	D	10/31/2015	Total re-write – please read thoroughly.
4.3.2.19	Process Audit Requirements	1/1/2004	C	3/31/2011	Reworded to include all special process audits.
4.3.3	PPAP Approval	1/1/2004	C	10/31/2015	Changed Approval, Interim Approval, and Rejection criteria.
4.4	Certified Parts Process (Optional)	1/1/2004	D	5/31/2010	Moved from 4.13, now optional at Quality Director’s request, referenced 4.8
4.4.1	Ongoing Quality/Annual Parts Validation	1/1/2004	D	10/31/2015	Clarified Annual validation results are maintained at the

	Requirements				Suppliers' location unless requested by the Tenneco Plant .
4.5	Change Request	3/31/2012	A	3/31/2012	New Addition
4.5.1	Deviation Process	1/1/2004	C	4/30/2013	Deviation Number may be handwritten, no disruption to the bar code is acceptable
4.5.2	Process Change Authorization	5/31/2010	F	10/31/2015	Added second paragraph clarifying PCN process is at a minimum 90 days.
4.6	Supplier Performance Requirements	1/1/2004	E	06/30/2014	Reports in TITAN under "Tenneco Cognos Reports"
4.6.1	Quality Performance	1/1/2004	E	06/30/2014	Reports in TITAN under "Tenneco Cognos Reports"
4.6.2	Delivery Performance	1/1/2004	E	3/31/2012	Re-write of entire section
4.6.3	Service Parts Delivery Performance	1/1/2004	D	5/31/2010	Moved from 4.7
4.6.4	Quarterly Supplier Scorecards	5/31/2010	A	5/31/2010	New/added
4.7	Continuous Improvement	1/1/2004	D	10/31/2015	Clarification on expected metrics.
4.8	Material Rejection	1/1/2004	E	6/30/2014	eMRR dB revision
4.8.1	Disposition of Suspect/Non-Conforming Material	1/1/2004	C	6/30/2014	eMRR dB revision
4.8.2	Handling of Material at Supplier Location	1/1/2004	C	6/30/2014	Supplier shall use Tenneco labeling
4.8.3	Handling of Material In-Transit or at Tenneco Location	1/1/2004	B	5/31/2010	Moved from 4.5.2.2
4.9	Corrective Action	1/1/2004	B	5/31/2010	Moved from 4.5.1
4.9.1	Corrective Action Reporting	1/1/2004	D	10/31/2015	Added (Reference Tenneco Expectation Letter located on the eMRR Home page under "Useful links")
4.9.2	Corrective Action Timing	1/1/2004	C	3/31/2011	Supplier's Quality Manager (or designate) must approve
4.10	Supplier Improvement Process (SIP)	5/31/2010	C	6/30/2014	Updated Supplier Selection, Initial Visit, and Exit criteria.
4.11	Controlled Shipping	1/1/2004	D	10/31/2015	Added last statement – Defective Pass Thru Parts and/or Pass Thru



					characteristics may be placed on automatic CSI, the potential of CSII depending on criticality.
4.11.1	Controlled Shipping – Level I	1/1/2004	D	3/31/2011	CSI identification labels must contain MRR number and be located near shipping labels
4.11.2	Controlled Shipping- Level II	1/1/2004	D	10/31/2015	The labels for CSII must be printed in orange.
4.11.3	Tenneco Revocation Process	1/1/2004	C	5/31/2010	Moved from 4.12.3
4.11.4	Customer Directed Supplier Mediations	5/31/2010	A	5/31/2010	Added
4.12	Cost Recovery	1/1/2004	C	5/31/2010	Moved from 4.15
4.13	Supplier Quality System Assessment	1/1/2004	C	5/31/2010	Moved from 4.17
4.14	Record Retention	1/1/2004	C	5/31/2010	Moved from 4.18
4.15	Training	1/1/2004	C	5/31/2010	Moved from 4.19 and added Global Working Conditions Guidance requirements
4.16	Field Issues	6/30/2014	A	6/30/2014	New Addition
5.0	Tooling and Equipment	1/1/2004	B	12/22/2005	NA Manual Integrated into the Global Manual
5.1	Tooling and Equipment Policy	1/1/2004	C	3/31/2011	Alternate identification must be approved in writing by authorized Tenneco representative.
5.2	Changes/Maintenance of Tenneco Owned Tooling	1/1/2004	B	12/22/2005	NA Manual Integrated into the Global Manual
5.3	Payment Terms and Conditions for Tenneco Owned Tooling	1/1/2004	I	02/28/17	Removed Payment for Tooling Schedule table.
6.0	Logistics	1/1/2004	N/A	N/A	Created Heading for Section
6.1	Tenneco Logistics Policy	1/1/2004	C	5/31/2010	Full compliance with national and international export requirements
6.2	Logistics and Material Protocol	1/1/2004	A	6/22/2006	Tenneco Inbound Material and Logistics Protocol changed
6.3	Basic Packing List Requirements	1/1/2004	B	12/22/2005	NA Manual Integrated into the Global Manual

6.4	Basic Bill of Lading Requirements	1/1/2004	B	12/22/2005	NA Manual Integrated into the Global Manual
7.0	Packaging	1/1/2004	N/A	N/A	Created Heading for Section
7.1	Supplier Responsibility	1/1/2004	B	12/22/2005	NA Manual Integrated into the Global Manual
7.2	Ergonomics	1/1/2004	C	5/31/2010	Added
7.3	Expendable Packaging Considerations	1/1/2004	B	12/22/2005	NA Manual Integrated into the Global Manual
7.4	Pack Quantity	1/1/2004	B	12/22/2005	NA Manual Integrated into the Global Manual
7.5	Additional Protection within Containers	1/1/2004	B	12/22/2005	NA Manual Integrated into the Global Manual
7.6	Labeling and Identification	1/1/2004	C	2/14/2008	Changed AIAG B3 to AIAG B10
7.7	Substrate Handling	5/31/2010	A	5/31/2010	Added
8.0	Environmental Health and Safety (EHS)	1/1/2004	N/A	N/A	Created Heading for Section
8.1	EH&S Policy	1/1/2004	C	3/31/2011	Tenneco encourages alignment with Environmental and Sustainability codes (located at AIAG website), and ISO 14001.
8.2	Supplier Visits	1/1/2004	D	5/31/2010	Removed IMDS (now in 4.3.1). Entire section moved from 8.3
8.3	Security	1/1/2004	C	5/31/2010	Section moved from 8.4.
8.3.1	Tenneco Facility Security	1/1/2004	C	5/31/2010	Section moved from 8.4.
8.3.2	Supplier Data Security	3/31/2011	A	3/31/2011	Separated Tenneco facility security from Supplier data security and added Supplier Data Security Self-Assessment form link
9.0	Corporate Responsibility for the Automotive Supply Chain	5/31/2010	A	5/31/2010	New Section added
9.1	Global Working Conditions Guidance Statements	5/31/2010	B	3/31/2011	Added suggestion to investigate training opportunities regarding this subject at AIAG website.
9.2	Conflict Minerals Compliance	06/30/2014	A	06/30/2014	New Section Added

9.3	Tenneco Statement on Efforts to Prevent Slavery and Human Trafficking in its Supply Chains	7/10/2017	A	7/10/2017	New Section Added
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## Appendix A

### North American Region Specific Requirements

Latest Changes Highlighted. Date format: mm/dd/yyyy

Section	Content	Creation Date	Revision Letter	Revision Date	Revision
A.1.0	Locations	04/04/2008	C	04/04/2008	Created Heading for Section
A.1.1	North American Original Equipment Locations	1/1/2004	D	05/31/2010	Updated
A.1.2	North America Aftermarket Locations	1/1/2004	B	12/22/2005	NA Manual Integrated into the Global Manual
A.2.0	North America Free Trade Agreement (NAFTA)	1/1/2004	B	12/22/2005	NA Manual Integrated into the Global Manual
A.2.1	NAFTA Policy	1/1/2004	B	12/22/2005	NA Manual Integrated into the Global Manual
A.2.2	NAFTA Certificate	1/1/2004	B	06/24/2016	Total Re-write – please review
A.2.3	Minority Supplier Requirements (US Certified Minority Businesses only)	1/1/2004	B	3/31/2011	Added requirement to upload certificates to TITAN C-folder and link to NMSDC website
A.2.4	Disadvantage Supplier Requirements (US Federal Gov. Certified SDB Businesses only)	3/31/2011	A	3/31/2011	Added this section
A.2.5	Conflict Minerals Wall Street Reform and Consumer Protection Act of 2010. (Dodd-Frank Act)	4/30/2013	A	4/30/2013	Added this section
A.3.0	Supplier Agreements	1/1/2004	B	12/22/2005	NA Manual Integrated into the Global Manual
A 3.1	Purchase Orders	1/1/2004	B	12/22/2005	NA Manual Integrated into the Global Manual
A 3.2	Blanket Orders	1/1/2004	B	12/22/2005	NA Manual Integrated into the Global Manual
A.3.3	Payment Policy	1/1/2004	B	12/22/2005	NA Manual Integrated into

					the Global Manual
A.3.4	TITAN Tenneco Interactive Alliance Network	3/1/2010	A	5/31/2010	Added
A.3.5	Invoicing	1/1/2004	D	3/31/2011	Added information the invoice must include
A.4.0	EDI Electronic Data Interchange	3/31/2012	F	3/31/2012	Revised EDIFACT Specifications
A.4.1	ASN Requirements	3/31/2012	A	3/31/2012	New Addition.
A.5.0	Logistics	1/1/2004	B	12/22/2005	NA Manual Integrated into the Global Manual
A.5.1	Freight Routing	1/1/2004	C	06/06/2008	Revised.
A.5.2	Canada Customs on Imports Between NA Borders (USA Canada and Mexico)	1/1/2004	B	12/22/2005	NA Manual Integrated into the Global Manual
A.5.3	Incoterms Definitions	1/1/2004	D	03/31/2011	Delays relief negotiated between GSCM buyer and supplier
A.5.4	Importer Security Filing (10+2) Requirements	3/1/2010	B	03/31/2011	Added customs web link
A.6.0	Packaging	1/1/2004	B	12/22/2005	NA Manual Integrated into the Global Manual
A.6.1	Supplier Responsibility	1/1/2004	B	12/22/2005	NA Manual Integrated into the Global Manual
A.6.2	Ergonomics	1/1/2004	B	12/22/2005	NA Manual Integrated into the Global Manual
A.6.3	Expendable Packaging Considerations	1/1/2004	B	12/22/2005	NA Manual Integrated into the Global Manual
A.6.3.1	Elastomer Expendable Packaging Requirements	1/1/2004	B	12/22/2005	NA Manual Integrated into the Global Manual
A.6.4	Returnable Packaging Requirements	1/1/2004	B	12/22/2005	NA Manual Integrated into the Global Manual
A.6.4.1	Pack Size Selection	1/1/2004	C	05/31/2010	Updated.
A.6.4.2	Pack Quantity	1/1/2004	B	12/22/2005	NA Manual Integrated into the Global Manual
A.6.4.3	Returnable Packaging Supplier	1/1/2004	B	12/22/2005	NA Manual Integrated into the Global Manual
A.6.4.4	Tote Quantity	1/1/2004	B	12/22/2005	NA Manual Integrated into the Global Manual
A.6.4.5	Palletization of Totes	1/1/2004	B	12/22/2005	NA Manual Integrated into



					the Global Manual
A.6.4.6	Handling	1/1/2004	B	12/22/2005	NA Manual Integrated into the Global Manual
A.6.4.7	Cleaning	1/1/2004	C	05/31/2010	Supplier is responsible for removing labels from totes.
A.6.4.8	Container Shortages	1/1/2004	B	12/22/2005	NA Manual Integrated into the Global Manual
A.6.5	Additional Protection Within Totes	1/1/2004	B	12/22/2005	NA Manual Integrated into the Global Manual
A.6.5.1	Parts Susceptible to Damage /Contamination	1/1/2004	B	12/22/2005	NA Manual Integrated into the Global Manual
A.6.5.2	Parts Excessively Dirty or Oily	1/1/2004	B	12/22/2005	NA Manual Integrated into the Global Manual
A.6.5.3	Labeling and Identification	1/1/2004	D	10/04/2013	Updated Bar Code Label Specification
A.6.5.4	Returnable Container Packaging Specification	1/1/2004	D	05/31/2010	Tenneco Allowable Returnable Packaging Descriptions link.
A.6.5.5	Substrate Handling	5/31/2010	B	03/31/2011	Pallets must be shrink wrapped and secured liberally with tamper proof tape
A.7.0	Environmental Health and Safety (EHS	1/1/2004	B	12/22/2005	NA Manual Integrated into the Global Manual
A.7.1	Material Safety Data Sheets (MSDS)	1/1/2004	B	12/22/2005	NA Manual Integrated into the Global Manual
A.7.2	MSDS – NA Contacts	1/1/2004	D	3/31/2011	Added IMDS web link
A.8.0	Supplier Quality System	6/30/2014	A	6/30/2014	New Addition
A.8.1	Supplier Requirements	6/30/2014	B	10/31/2015	Added requirements “After 24 hours and within the Tenneco Operations agreement, 10% of the defective product will be counted.”



Return to Index (Ctrl + Home)



**CONFIDENTIAL** p. 12

## Appendix B

### European Region Specific Requirements

Latest Changes Highlighted. Date Format: mm/dd/yyyy

Section	Content	Creation Date	Revision Letter	Revision Date	Revision
B	Introduction	7/07/2010	A	7/07/2010	EU Manual Integrated into the Global Manual
B.1.0	Organization	3/31/2011	A	3/31/2011	EU Manual Integrated into the Global Manual
B.1.1	European Original Equipment Locations	7/6/2010	A	7/6/2010	EU Manual Integrated into the Global Manual
B.1.2	European Aftermarket Locations	9/10/2010	A	9/10/2010	EU Manual Integrated into the Global Manual
B.2.0	Supplier Agreements	3/31/2011	A	3/31/2011	EU Manual Integrated into the Global Manual
B.2.1	Supplier Agreements and Requirements Blanket Orders	9/10/2010	A	9/10/2010	EU Manual Integrated into the Global Manual
B.2.2	Payment Policy	7/8/2010	A	7/8/2010	EU Manual Integrated into the Global Manual
B.2.3	Invoicing	9/10/2010	A	9/10/2010	EU Manual Integrated into the Global Manual
B.2.4	Company Issues	9/10/2010	A	9/10/2010	EU Manual Integrated into the Global Manual
B.3.0	Quality Requirements	3/31/2011	A	3/31/2011	EU Manual Integrated into the Global Manual
B.3.1	Quality Policy	7/8/2010	A	7/8/2010	EU Manual Integrated into the Global Manual
B.3.2	Supplier Requirements	10/26/2010	B	10/26/2010	EU Manual Integrated into the Global Manual
B.4.0	Engineering Requirements	3/31/2011	A	3/31/2011	EU Manual Integrated into the Global Manual
B.4.1	Engineering Requirements	7/8/2010	A	7/8/2010	EU Manual Integrated into the Global Manual



B.5.0	Logistics	3/31/2011	A	3/31/2011	EU Manual Integrated into the Global Manual
B.5.1	Freight Routing	10/20/2010	D	10/20/2010	EU Manual Integrated into the Global Manual
B.5.2	Logistic Guideline	3/31/2012	A	3/31/2012	Added
B.6.0	Electronic Data Interchange (EDI) or Supplier Network Collaboration (SNC)	3/31/2011	B	8/31/2016	Total rewrite due to SNC communication tool, please review.
B.6.1	ASN Requirements	3/31/2011	B	8/31/2016	Total re-write please review.
B.7.0	Packaging	10/20/2010	C	04/30/2013	EU Manual Integrated into the Global Manual
B.7.1	Packaging	10/20/2010	C	04/30/2013	Added exchange criteria for used UIC standardized European wire mesh boxes
B.8.0	Environmental Health and Safety (EH&S)	3/31/2011	A	3/31/2011	EU Manual Integrated into the Global Manual
B.8.1	Environmental Management System	7/14/2010	A	7/14/2010	EU Manual Integrated into the Global Manual
B.8.2	Material Safety Data Sheets	7/8/2010	A	7/8/2010	EU Manual Integrated into the Global Manual
B.8.3	Material Safety Data Sheets and IMDS ID	10/20/2010	A	10/20/2010	EU Manual Integrated into the Global Manual
B.9.0	Disaster Recovery Program	3/31/2011	A	3/31/2011	EU Manual Integrated into the Global Manual
B.9.1	Disaster Recovery Program	7/8/2010	A	7/8/2010	EU Manual Integrated into the Global Manual