

PATENT ASSIGNMENT

Electronic Version v1.1
 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	Amendment to Security Interest in United States Patents

CONVEYING PARTY DATA

Name	Execution Date
Tenneco Inc.	03/08/2007
Tenneco Automotive Operating Company Inc.	03/08/2007
Tenneco International Holding Corp.	03/08/2007
Tenneco Global Holdings Inc.	03/08/2007
The Pullman Company	03/08/2007
TMC Texas Inc.	03/08/2007
Clevite Industries Inc.	03/08/2007

RECEIVING PARTY DATA

Name:	U.S. Bank National Association
Street Address:	5847 San Felipe
Internal Address:	Suite 1050
City:	Houston
State/Country:	TEXAS
Postal Code:	77057

PROPERTY NUMBERS Total: 49

Property Type	Number
Patent Number:	5848168
Patent Number:	6005957
Patent Number:	6072880
Patent Number:	6594365
Patent Number:	4913260
Patent Number:	4735283
Patent Number:	4969264
Patent Number:	5118476
Patent Number:	4865154

OP \$1960.00 5848168

Patent Number:	5148597
Patent Number:	5134852
Patent Number:	5200582
Patent Number:	5365025
Patent Number:	5482681
Patent Number:	5519994
Patent Number:	5724849
Patent Number:	6158546
Patent Number:	4673058
Patent Number:	6405827
Patent Number:	6446322
Patent Number:	6892855
Patent Number:	7063134
Application Number:	11639111
Application Number:	11494272
Application Number:	11494273
Application Number:	11472261
Application Number:	11471311
Application Number:	11493994
Application Number:	60875184
Application Number:	60875187
Application Number:	60875186
Application Number:	11546501
Application Number:	60890637
Application Number:	11644024
Application Number:	60879240
Application Number:	60872588
Application Number:	10760179
Application Number:	10885494
Application Number:	11013095
Application Number:	11331443
Application Number:	11269124
Application Number:	60754586
Application Number:	11590591
Application Number:	60741114

Application Number:	11316170
Application Number:	11605513
Application Number:	60754999
Application Number:	60874921
Application Number:	60858762

CORRESPONDENCE DATA

Fax Number: (312)706-9000
Correspondence will be sent via US Mail when the fax attempt is unsuccessful.
Phone: 312-701-8601
Email: lasmith@mayerbrownrowe.com
Correspondent Name: Deborah Schavey Ruff
Address Line 1: P.O. Box 2828
Address Line 2: Mayer, Brown, Rowe & Maw LLP
Address Line 4: Chicago, ILLINOIS 60690-2828

ATTORNEY DOCKET NUMBER:	07688/00638420
NAME OF SUBMITTER:	Deborah Schavey Ruff

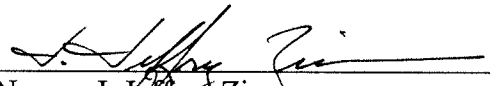
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**AMENDMENT TO SECURITY INTEREST
IN UNITED STATES PATENTS**


FOR GOOD AND VALUABLE CONSIDERATION, receipt and sufficiency of which are hereby acknowledged, Tenneco Inc., Tenneco Automotive Operating Company Inc., Tenneco International Holding Corp., Tenneco Global Holdings Inc., The Pullman Company, TMC Texas Inc. and Clevite Industries Inc., each a Delaware corporation (each, a “Grantor” and collectively, “the Grantors”) with principal offices at 500 North Field Drive, Lake Forest, Illinois 60045 and U.S. Bank National Association (as successor to Wachovia Bank, National Association), as Collateral Agent, with principal offices at 5847 San Felipe, Suite 1050, Houston, Texas 77057 (the “Collateral Agent”), hereby agree to amend Schedule A to the Security Interest in United States Patents executed by Grantors and Collateral Agent on June 19, 2003 and recorded at the U.S. Patent and Trademark Office (“Security Interest”). Schedule A was previously amended and restated in its entirety pursuant to the Amendment to Security Interest in United States Patents executed by Grantors and Collateral Agent in April 2005 and recorded at the U.S. Patent and Trademark Office and further amended by the Amendment to Security Interest in United States Patents executed by Grantors and Collateral Agent in April 2006 and recorded at the U.S. Patent and Trademark Office. Schedule A to the Security Interest, as supplemented by Schedule B to the Security Interest, shall be further amended to include Schedule C attached hereto.

IN WITNESS WHEREOF, the undersigned have executed this Agreement as of the 8th
day of March 2007.

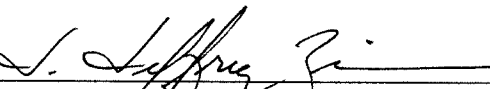
Tenneco Inc.

By: 
Name: J. Jeffrey Zimmerman
Title: Vice President - Law

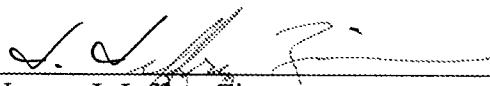
Tenneco Automotive Operating Company Inc.

By: 
Name: J. Jeffrey Zimmerman
Title: Vice President - Law


Tenneco International Holding Corp.

By: 
Name: J. Jeffrey Zimmerman
Title: Vice President - Law

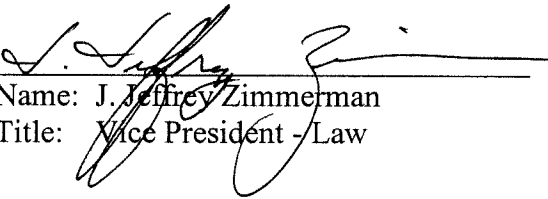
Tenneco Global Holdings Inc.

By: 
Name: J. Jeffrey Zimmerman
Title: Vice President - Law

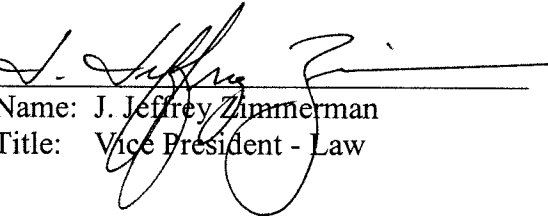
The Pullman Company

By: 
Name: J. Jeffrey Zimmerman
Title: Vice President - Law

TMC Texas Inc.

By: 
Name: J. Jeffrey Zimmerman
Title: Vice President - Law

Clevite Industries Inc.

By: 
Name: J. Jeffrey Zimmerman
Title: Vice President - Law

U.S. Bank National Association,
as Collateral Agent

By: _____
Name:
Title:

TMC Texas Inc.

By: _____

Name: J. Jeffrey Zimmerman

Title: Vice President - Law

Clevite Industries Inc.

By: _____

Name: J. Jeffrey Zimmerman

Title: Vice President - Law

U.S. Bank National Association,
as Collateral Agent

By: _____

Name: Steven A. Finklea, CCTS

Title: Vice President

SCHEDULE C

[See attached.]



**Tenneco Automotive Operating
Patent Portfolio by Family
U.S./PCT -- Active Cases**

HDP Case ID Client Ref. No.	Country Case Type~Relationship~Filing Type	Appln. No. Filing Date/(Lodged)	Patent No. Issue Date	Publication No. Publication Date	Next Tax Date Expiration Date	Status/Substatus
1316N-001691/US 2281	United States Regular~Original Filing~National	11/639111 12/14/2006				Filed-Pending
Title: Top Cap Crimping For Air Spring Suspension						
Inventors: KNEVELS, Luc Owner/Assignee: Tenneco Automotive Inc.						
1316N-001704/US	United States Regular~Original Filing~National	11/494272 7/27/2006				Filed-Pending
Title: Relative Axial Translation Prevention System						
Inventors: WALWORTH, Van T.; HOOK, David B.; WHITTAKER, Craig; BACARELLA, Joseph C.; MOSER, George History: Claims priority of PRO USSN 60/703281, filed 07/28/2005. Owner/Assignee: Tenneco Automotive Operating						
1316N-001705/US	United States Regular~Original Filing~National	11/494273 7/27/2006		2007/0022556A1 2/1/2007		Filed-Published
Title: Wind Deflector With Symmetrical Geometry						
Inventors: WALWORTH, Van T.; HOOK, David B.; WHITTAKER, Craig; HOWELL, Mark; MCGINN, William; BACARELLA, Joseph History: Claiming benefit of US Provisional 60/703283, filed 07/28/2005. Owner/Assignee: Tenneco Automotive Operating						
1316N-001708/US 3014	United States Regular~Original Filing~National	11/472261 6/21/2006		2006/0283676A1 12/21/2006		Filed-Published
Title: Four-Piece Piston						
Inventors: DEFERME, Stefan History: Based on US Provisional 60/692434, filed 06/21/2005. Owner/Assignee: Tenneco Automotive Operating						



**Tenneco Automotive Operating
Patent Portfolio by Family
U.S./PCT -- Active Cases**

HDP Case ID Client Ref. No.	Country Case Type~Relationship~Filing Type	Appln. No. Filing Date/(Lodged)	Patent No. Issue Date	Publication No. Publication Date	Next Tax Date Expiration Date	Status/Substatus
1316N-001709/US 3016	United States Regular~Original Filing~National	11/4/71311 6/20/2006		2006/0287791A1 12/21/2006		Filed-Published
Title: Semi-Active Anti-Roll System Inventors: BOON, Peter; REYBROUCK, Koen History: Based on PRO USSN 60/692433, filed 06/21/2005. Owner/Assignee: Tenneco Automotive Operating						
1316N-001711/US 3017	United States Regular~Original Filing~National	11/4/93994 7/27/2006		2007/0034466A1 2/15/2007		Filed-Published
Title: Asymmetrical Intake Damper Valve Inventors: PAESMANS, Johan; SPIRITUS, Walter; GOMMANS, Frank; TUTELEERS, Michel History: Claims benefit of PRO USSN 60/708354, filed 08/15/2005. Owner/Assignee: Tenneco Automotive Operating						
1316N-001712/US/PS2 #26	United States Provisional Filing~Original Filing~National	60/875184 12/15/2006				Filed-Pending
Title: Connectable-Disconnectable Shroud-Connector-Adapter Inventors: BACARELLA, Joseph C.; WALWORTH, Van T.; WHITAKER, Craig; MCGINN, William; HOOK, David B. Owner/Assignee: Tenneco Automotive Operating						
1316N-001713/US/PS2 #27	United States Provisional Filing~Original Filing~National	60/875187 12/15/2006				Filed-Pending
Title: Method Of Manufacture Of A Molded Hollow Using Tangential Structures Inventors: WALWORTH, Van T.; BACARELLA, Joseph C.; HOOK, David B.; MCGINN, William Owner/Assignee: Tenneco Automotive Operating						

**Tenneco Automotive Operating
Patent Portfolio by Family
U.S./PCT -- Active Cases**

HDP Case ID	Country	Appl. No.	Patent No.	Publication No.	Next Tax Date	Status/Substatus
Client Ref. No.	Case Type~Relationship~Filing Type	Filing Date/(Lodged)	Issue Date	Publication Date	Expiration Date	
1316N-001714/US/PS2 #28	United States Provisional Filing~Original Filing~National	60/875186 12/15/2006				Filed-Mailed

Title: Method Of Manufacture Using Heat Forming
 Owner/Assignee: Tenneco Automotive Operating
 Inventors: WALWORTH, Van T.; BACARELLA, Joseph C.; HOOK, David B.; MCGINN, William

1316N-001715/US D-3021/3022	United States Regular~Original Filing~National	11/546501 10/11/2006				Filed-Pending
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Title: Shock Absorber Having A Continuously Variable Semi-Active Valve
 Owner/Assignee: Tenneco Automotive Operating
 Inventors: VANHEES, Gert; REYBROUCK, Koen

1316N-001722/US/PS1 D-2270	United States Provisional Filing~Original Filing~National	60/890637 2/20/2007				Filed-Unofficial
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Title: Positioning Feature And Method For Precise Vehicle Heights
 Owner/Assignee: Tenneco Automotive Operating
 Inventors: HEEREN, John; SANEN, Herman; MAARTEN, Maes

**Tenneco Automotive Operating
Patent Portfolio by Family
U.S./PCT -- Active Cases**

HDP Case ID	Country	Appl. No.	Patent No.	Publication No.	Next Tax Date	Status/Substatus
Client Ref. No.	Case Type-Relationship-Filing Type	Filing Date/(lodged)	Issue Date	Publication Date	Expiration Date	
2001U-001648/US 04-1993	United States Regular-Original Filing~National	11/6/44024 12/21/2006				Filed-Pending
Title: Fluid Bearing Assisted Assembly Of An Exhaust Treatment Device						
Inventors: KOTRBA, Adam J.; OLIVIER, Keith G.						
History: Claims benefit of PRO USSN 60/754586, filed 12/28/2005.						
2001U-001649/US 05-0042	United States Regular-Original Filing~National	11/590591 10/31/2006				Filed-Pending
Title: Muffler Assembly With Sound Absorbing Member						
Inventors: HILL, William E.						
History: Claims benefit of PRO USSN 60/741114, filed 12/01/2005.						
2001U-001651/US 05-0055	United States Regular-Original Filing~National	11/605513 11/28/2006				Filed-Pending
Title: Woven Metal Fiber Diesel Particulate Filter						
Inventors: RINALDI, Fabrizio						
History: Claims benefit of PRO USSN 60/754999, filed 12/29/2005.						
2001U-001653/US/PS1 06-0078	United States Provisional Filing~Original Filing~National	60/874921 12/14/2006				Filed-Pending
06-0079						
06-0082						
Title: Fluid Injecting And Mixing Systems For Exhaust After-Treatment Devices						
Inventors: SCHUSTER, Markus; GOMULKA, Ted G.; HAVERKAMP, Sascha						
Owner/Assignee: Tenneco Automotive Operating						



**Tenneco Automotive Operating
Patent Portfolio by Family
U.S./PCT -- Active Cases**

HDP Case ID Client Ref. No.	Country Case Type-Relationship-Filing Type	Appn. No. Filing Date/(Lodged)	Patent No. Issue Date	Publication No. Publication Date	Next Tax Date Expiration Date	Status/Substatus
2001U-001657/US/PS1 06-0093	United States Provisional Filing-Original Filing-National	60/879240 1/8/2007				Filed-Pending

Title: Chrome-Plated Workpieces
Inventors: PARISEAU, David L.; HORNER, David R.; DEAN, Mark
Owner/Assignee: Tenneco Automotive Operating

2001U-001659/US/PS1 05-0073	United States Provisional Filing-Original Filing-National	60/858762 11/14/2006				Filed-Pending
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Title: Device For Lowering Tail Pipe Exhaust Temperature
Inventors: ANGOSHARI, Negin; SCHUSTER, Markus
Owner/Assignee: Tenneco Automotive Operating

2001U-001660/US/PS1 06-0098	United States Provisional Filing-Original Filing-National	60/872588 12/1/2006				Filed-Pending
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Title: Catalytic Converter With Mounting Device For A Hot Exhaust Gas Oxygen Sensor
Inventors: BALK, Timothy S.; SULLIVAN, Perrilla S.; COTHRON, Tom; WALWORTH, Brad
Owner/Assignee: Tenneco Automotive Operating

**Tenneco Automotive Inc.
Patent Portfolio by Family
U.S./PCT -- Active Cases**

HDP Case ID	Country	Appn. No.	Patent No.	Publication No.	Next Tax Date	Status/Substatus
Client Ref. No.	Case Type~Relationship~Filing Type	Filing Date/(Lodged)	Issue Date	Publication Date	Expiration Date	
2001E-001622/US	United States Regular~Original Filing~National	08/7/43334 11/4/1996	5848168 12/8/1998		6/8/2010 11/4/2016	Granted Transferred: Resp. Upon Issuance

Title: **Active noise Conditioning System**
Inventors: SHIPPS, J. Clay; LEVREULT, John E., Jr.

Owner/Assignee: Tenneco Automotive Operating

2001E-001623/US	United States Regular~Original Filing~National	09/032317 2/27/1998	6005957 12/21/1999		6/21/2007 2/27/2018	Granted Transferred: Resp. Upon Issuance
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Title: **Loudspeaker Pressure Plate**
Inventors: MEEKS, Timothy E.

Owner/Assignee: Tenneco Automotive Operating

2001E-001624/US	United States Regular~Original Filing~National	09/032326 2/27/1998	6072880 6/6/2000		12/6/2007 2/27/2018	Granted Transferred: Resp. Upon Issuance
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Title: **Modular Active Silencer With Port Dish**
Inventors: SHIPPS, J. Clay; RENZ, Charles J.

Owner/Assignee: Tenneco Automotive Operating

2001E-001625/US	United States Regular~Original Filing~National	09/195294 11/18/1998	6594365 7/15/2003		1/15/2011 11/18/2018	Granted Transferred: Resp. Upon Issuance
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Title: **Acoustic System Identification Using Acoustic Masking**
Inventors: EATWELL, Graham P.

Owner/Assignee: Tenneco Automotive Operating

Tenneco Automotive Operating
Patent Portfolio by Family
U.S./PCT -- Active Cases

HDP Case ID	Country	Appl. No.	Patent No.	Publication No.	Next Tax Date	Status/Substatus
Client Ref. No.	Case Type~Relationship~Filing Type	Filing Date/(Lodged)	Issue Date	Publication Date	Expiration Date	
2001U-001402/US	United States Regular~Original Filing~National	06/142490 1/1/1988	4913260 4/3/1990		10/3/2001 1/1/2008	Granted Transferred: Resp. Upon Issuance
<p>Title: Gas Silencing System With Controlled Sound Attenuation Inventors: FALLON, Blaise M. Owner/Assignee: Tenneco Automotive Operating</p>						
2001U-001437/US	United States Regular~Original Filing~National	06/937835 12/4/1986	4735283 4/5/1988		10/5/1999 12/4/2006	Granted Transferred: Resp. Upon Issuance
<p>Title: Muffler With Flow Director Plates Inventors: MACALUSO, Howard C. Owner/Assignee: Tenneco Automotive Operating</p>						
2001U-001461/US	United States Regular~Continuation-In-Part~National	07/156838 4/1/1988	4969264 11/13/1990		5/13/2002 11/13/2007	Granted Transferred: Resp. Upon Issuance
<p>Title: Catalytic Converter And Substrate Support Inventors: DRYER, Leonard J.; SCHWARTZ, Thomas J. History: CIP of SN 873684, filed 6/12/86. Owner/Assignee: Tenneco Automotive Operating</p>						
2001U-001461/US/DVA	United States Regular~Division~National	07/586419 9/21/1990	5118476 6/2/1992		12/2/2003 6/2/2009	Granted Transferred: Resp. Upon Issuance
<p>Title: Catalytic Converter And Substrate Support Inventors: DRYER, Leonard J.; SCHWARTZ, Thomas J. History: DIV of CIP SN 156838, Filed 04/01/88; CIP of SN 873684, Filed 06/12/86. Owner/Assignee: Tenneco Automotive Operating</p>						

**Tenneco Automotive Operating
Patent Portfolio by Family
U.S./PCT -- Active Cases**

HDP Case ID Client Ref. No.	Country Case Type~Relationship~Filing Type	Appln. No. Filing Date/(Lodged)	Patent No. Issue Date	Publication No. Publication Date	Next Tax Date Expiration Date	Status/Substatus
2001U-001464/US	United States Regular~Original Filing~National	07/249504 9/26/1988	4865154 9/12/1989		3/12/2001 9/26/2008	Granted Transferred: Resp. Upon Issuance

Title: **Muffler With Drain Holes**
Inventors: HANSON, Roger D.; HILL, William E.

Owner/Assignee: Tenneco Automotive Operating

2001U-001488/US	United States Regular~Original Filing~National	573386 8/27/1990	5148597 9/22/1992		3/22/2004 8/27/2010	Granted Transferred: Resp. Upon Issuance
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Title: **Method Of Making A Collector Device**
Inventors: WEEKS, Andrew M.

Owner/Assignee: Tenneco Automotive Operating

2001U-001489/US	United States Regular~Original Filing~National	07/571181 8/23/1990	5134852 8/4/1992		2/4/2004 8/23/2010	Granted Transferred: Resp. Upon Issuance
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Title: **Clam Shell Type Y-Joint**
Inventors: WEEKS, Andrew M.

Owner/Assignee: Tenneco Automotive Operating

2001U-001527/US	United States Regular~Original Filing~National	07/752009 8/29/1991	5200582 4/6/1993		10/6/2004 8/29/2011	Granted Transferred: Resp. Upon Issuance
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Title: **Passive Muffler For Low Pass Frequencies**
Inventors: KRAAL, Leon A.; SAGER, Robert L., Jr.

Owner/Assignee: Tenneco Automotive Operating

Tenneco Automotive Operating
Patent Portfolio by Family
U.S./PCT -- Active Cases

HDP Case ID	Country	Appln. No.	Patent No.	Publication No.	Next Tax Date	Status/Substatus
Client Ref. No.	Case Type~Relationship~Filing Type	Filing Date/(Lodged)	Issue Date	Publication Date	Expiration Date	
2001U-001548/US/COA	United States Regular~Continuation~National	08/11/0332 8/20/1993	5365025 11/15/1994		5/15/2006 1/24/2012	Granted Transferred: Resp. Upon Issuance
<p>Title: Low Backpressure Straight-Through Reactive And Dissipative Muffler Inventors: KRAAL, Leon A.; SAGER, Robert L., Jr.; HILL, William E. History: CON of SN 07/825536, filed 1/24/92.</p> <p>Owner/Assignee: Tenneco Automotive Operating</p>						
2001U-001568/US	United States Regular~Continuation~National	07/754042 9/3/1991	5482681 1/9/1996		7/9/2007 1/9/2013	Granted Transferred: Resp. Upon Issuance
<p>Title: Catalytic Converter For Motor Vehicles Inventors: SAGER, Robert L., Jr. History: CON of 175150, Filed 3/30/88 (ABD); A CIP of SN 778023, Filed 9/20/85.</p> <p>Owner/Assignee: Tenneco Automotive Operating</p>						
2001U-001596/US	United States Regular~Original Filing~National	08/198521 2/18/1994	5519994 5/28/1996		11/28/2007 2/18/2014	Granted Transferred: Resp. Upon Issuance
<p>Title: Muffler With Inlet Pipe Equalizer Inventors: HILL, William E.</p> <p>Owner/Assignee: Tenneco Automotive Operating</p>						
2001U-001621/US	United States Regular~Original Filing~National	08/741944 10/31/1996	5724849 3/10/1998		9/10/2009 10/31/2016	Granted Transferred: Resp. Upon Issuance
<p>Title: Process For Forming A Tube For Use In A Sound Attenuating Muffler Inventors: FROSSARD, Norman J., Jr.</p> <p>Owner/Assignee: Tenneco Automotive Operating</p>						

**Tenneco Automotive Operating
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U.S./PCT -- Active Cases**

HDP Case ID Client Ref. No.	Country Case Type~Relationship~Filing Type	Appn. No. Filing Date/(Lodged)	Patent No. Issue Date	Publication No. Publication Date	Next Tax Date Expiration Date	Status/Substatus
2001U-001626/US W98-256	United States Regular~Original Filing~National	09/339996 6/25/1999	6158546 12/12/2000		6/12/2008 6/25/2019	Granted Transferred: Resp. Upon Issuance
Title: Straight Through Muffler With Conically-Ended Output Passage Inventors: HANSON, Roger D.; STERRETT, Dale E. Owner/Assignee: Tenneco Automotive Operating						
2001U-001627/US	United States Regular~Original Filing~National	861525 5/9/1986	4673058 6/16/1987		12/16/1998 5/9/2006	Granted Transferred: Resp. Upon Issuance
Title: High Performance Automotive Muffler Inventors: ROBERTS, Peter; CHONG, Sydney History: Resp Trans to HD&P 1/1/98. Owner/Assignee: Tenneco Automotive Operating						
2001U-001629/US 001556	United States Regular~Original Filing~National	09/568633 5/10/2000	6405827 6/18/2002		12/18/2009 5/10/2020	Granted Transferred: Resp. Upon Issuance
Title: Lock Seam For Canisters Inventors: CHURCH, Russell E. Owner/Assignee: Tenneco Automotive Operating						
2001U-001630/US 001554	United States Regular~Original Filing~National	09/568632 5/10/2000	6446322 9/10/2002		3/10/2010 5/10/2020	Granted Transferred: Resp. Upon Issuance
Title: Method And Apparatus For Sealing Canisters Inventors: CHURCH, Russell E. Owner/Assignee: Tenneco Automotive Operating						

**Tenneco Automotive Operating
Patent Portfolio by Family
U.S./PCT -- Active Cases**

HDP Case ID Client Ref. No.	Country Case Type~Relationship~Filing Type	Appln. No. Filing Date/(Lodged)	Patent No. Issue Date	Publication No. Publication Date	Next Tax Date Expiration Date	Status/Substatus
2001U-001637/US 001657	United States Regular~Original Filing~National	10/373821 2/25/2003	6892855 5/17/2005	2004/0163885A1 8/26/2004	11/17/2008 5/28/2023	Granted

Title: **Embossed Shell For Spun Mufflers**
 Inventors: WARMENHOVEN, John L.
 History: Based on USSN 10/373821, filed 02/25/2003

Owner/Assignee: Tenneco Automotive Operating

2001U-001639/US 1997	United States Regular~Original Filing~National	10/876242 6/24/2004	7063134 6/20/2006	2005/0284623A1 12/29/2005	12/20/2009 6/24/2024	Granted Transferred: Resp. Upon Issuance
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Title: **Combined Muffler/Heat Exchanger**
 Inventors: POOLE, Wallace J.; ABBOTT, James R.; KUSCHEL, Gabriel A.; HUA, Jian Guo

Owner/Assignee: Tenneco Automotive Operating

2001U-001640/US	United States Regular~Original Filing~National	10/760179 1/16/2004		2005/0155816A1 7/21/2005		Filed-Published
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Title: **Dynamic Exhaust System For Advanced Internal Combustion Engines**
 Inventors: ALCINI, William V.; ROBLES, Pavel; VENEZIANO, Richard; WEINERT, Rico; SCHINKO, Alexander; LABARGE, George

Owner/Assignee: Tenneco Automotive Operating

2001U-001642/US 002080	United States Regular~Original Filing~National	10/885494 7/6/2004		2006/0005598A1 1/12/2006		Filed-Published
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Title: **Weld Box Auto Roll Sensing And Positioning System**
 Inventors: WILLIS, Michael J.

Owner/Assignee: Tenneco Automotive Operating

**Tenneco Automotive Operating
Patent Portfolio by Family
U.S./PCT -- Active Cases**

HDP Case ID Client Ref. No.	Country Case Type~Relationship~Filing Type	Appl. No. Filing Date/(Lodged)	Patent No. Issue Date	Publication No. Publication Date	Next Tax Date Expiration Date	Status/Substatus
2001-U-001643/US 002077	United States Regular~Original Filing~National	11/013095 12/15/2004		2006/0156794A1 7/20/2006		Filed-Published
<p>Title: Apparatus And Method For Measuring Gap Bulk Density of A Catalytic Converter Support Mat Inventors: HORN, Tobin L.; WHEELER, Scott J. Owner/Assignee: Tenneco Automotive Operating</p>						
2001-U-001644/US 04-0014	United States Regular~Original Filing~National	11/331443 1/12/2006		2006/0150382A1 7/13/2006		Filed-Published
<p>Title: Post Calibration Catalytic Converter Canning Apparatus And Method Inventors: MARTIN, Scott M. History: Claims benefit of PRO USSN 60/643357, filed 01/12/2005. Owner/Assignee: Tenneco Automotive Operating</p>						
2001-U-001647/US 05-0054	United States Regular~Original Filing~National	11/269124 11/8/2005				Filed-Pending
<p>Title: Selective Catalyst Reduction Of Nitrogen Oxides With Hydrogen Inventors: RINALDI, Fabrizio C.; YANG, Ralph T.; Qi, Gongshin Owner/Assignee: Tenneco Automotive Operating</p>						
2001-U-001648/US 04-1993	United States Regular~Original Filing~National	11/644024 12/21/2006				Filed-Pending
<p>Title: Fluid Bearing Assisted Assembly Of An Exhaust Treatment Device Inventors: KOTRBA, Adam J.; OLIVIER, Keith G. History: Claims benefit of PRO USSN 60/754586, filed 12/28/2005. Owner/Assignee: Tenneco Automotive Operating</p>						

Tenneco Automotive Operating
Patent Portfolio by Family
U.S./PCT -- Active Cases

HDP Case ID	Country	Appl. No.	Patent No.	Publication No.	Next Tax Date	Status/Substatus
Client Ref. No.	Case Type~Relationship~Filing Type	Filing Date/(Lodged)	Issue Date	Publication Date	Expiration Date	
2001-U-001648/US/PS1 1993	United States Provisional Filing~Original Filing~National	60/754586 12/28/2005				Filed-Pending

Title: **Fluid Bearing Assisted Assembly Of An Exhaust Treatment Device**
Inventors: KOTRBA, Adam J.; OLIVIER, Keith G. Owner/Assignee: Tenneco Automotive Operating

2001-U-001649/US 05-0042	United States Regular~Original Filing~National	11/590591 10/31/2006				Filed-Pending
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Title: **Muffler Assembly With Sound Absorbing Member**
Inventors: HILL, William E. History: Claims benefit of PRO USSN 60/741114, filed 12/01/2005. Owner/Assignee: Tenneco Automotive Operating

2001-U-001649/US/PS1	United States Provisional Filing~Original Filing~National	60/741114 12/1/2005				Filed-Pending
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Title: **Muffler Assembly With Sound Absorbing Member**
Inventors: HILL, William E. Owner/Assignee: Tenneco Automotive Operating

2001-U-001650/US 05-0052	United States Regular~Original Filing~National	11/316170 12/22/2005				Filed-Pending
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Title: **Exhaust Dispersion Device**
Inventors: GIRARD, James W.; LACIN, Figen Owner/Assignee: Tenneco Automotive Operating

Tenneco Automotive Operating
Patent Portfolio by Family
U.S./PCT -- Active Cases

HDP Case ID	Country	Appl. No.	Patent No.	Publication No.	Next Tax Date	Status/Substatus
Client Ref. No.	Case Type~Relationship~Filing Type	Filing Date/(Lodged)	Issue Date	Publication Date	Expiration Date	
2001-U-001651/US 05-0055	United States Regular~Original Filing~National	11/605513 11/28/2006				Filed-Pending
Title: Woven Metal Fiber Diesel Particulate Filter						
Inventors: RINALDI, Fabrizio						
History: Claims benefit of PRO USSN 60/754999, filed 12/29/2005.						
2001-U-001651/US/PS1 05-0055	United States Provisional Filing~Original Filing~National	60/754999 12/29/2005				Filed-Pending
Title: Woven Metal Fiber Diesel Particulate Filter						
Inventors: RINALDI, Fabrizio						
Owner/Assignee: Tenneco Automotive Operating						
2001-U-001653/US/PS1 06-0078 06-0079 06-0082	United States Provisional Filing~Original Filing~National	60/874921 12/14/2006				Filed-Pending
Title: Fluid Injecting And Mixing Systems For Exhaust After-Treatment Devices						
Inventors: SCHUSTER, Markus; GOMULKA, Ted G.; HAVERKAMP, Sascha						
Owner/Assignee: Tenneco Automotive Operating						
2001-U-001657/US/PS1 06-0093	United States Provisional Filing~Original Filing~National	60/879240 1/8/2007				Filed-Pending
Title: Chrome-Plated Workpieces						
Inventors: PARISEAU, David L.; HORNER, David R.; DEAN, Mark						
Owner/Assignee: Tenneco Automotive Operating						

Tenneco Automotive Operating
Patent Portfolio by Family
U.S./PCT -- Active Cases

HDP Case ID Client Ref. No.	Country Case Type~Relationship~Filing Type	Appl. No. Filing Date/(Lodged)	Patent No. Issue Date	Publication No. Publication Date	Next Tax Date Expiration Date	Status/Substatus
2001-U-001659/US/PS1 05-0073	United States Provisional Filing~Original Filing~National	60/858762 11/14/2006				Filed-Pending
<p>Title: Device For Lowering Tail Pipe Exhaust Temperature Inventors: ANGOSHARI, Negin; SCHUSTER, Markus Owner/Assignee: Tenneco Automotive Operating</p>						
2001-U-001660/US/PS1 06-0098	United States Provisional Filing~Original Filing~National	60/872588 12/1/2006				Filed-Pending
<p>Title: Catalytic Converter With Mounting Device For A Hot Exhaust Gas Oxygen Sensor Inventors: BALK, Timothy S.; SULLIVAN, Perrilla S.; COTHRON, Tom; WALLWORTH, Brad Owner/Assignee: Tenneco Automotive Operating</p>						

<u>Country</u>	<u>Case Type</u>	<u>Relation Type</u>	<u>Client/Division</u>	<u>Status</u>	<u>Application</u>		<u>Patent</u>	
					<u>Date</u>	<u>Number</u>	<u>Number</u>	<u>Title</u>
United States	Regular	Original Filing	TENNECO AUTOMOTIVE OPERATING COMPANY INC.	Filed	6/7/2004	10/961,373		LINEAR CONTROL OF AN AUTOMOBILE SUSPENSION
United States	Regular	Original Filing	TENNECO AUTOMOTIVE OPERATING COMPANY INC.	Filed	4/22/2005	11/111,832		MODEL FREE SEMI-ACTIVE VEHICLE SUSPENSION SYSTEM
United States	Regular	Original Filing	TENNECO AUTOMOTIVE OPERATING COMPANY INC.	Filed	7/14/2005	11/181,026		SHOCK ABSORBER WITH INTEGRATED DISPLACEMENT SENSOR
United States	Provisional Filing	Original Filing	TENNECO AUTOMOTIVE OPERATING COMPANY INC.	Docketed		Unknown		CATALYTIC CONVERTER - POST CALIBRATION CANNING GAGING TECHNOLOGY
		Original Filing	TENNECO AUTOMOTIVE OPERATING COMPANY INC.	Filed	9/20/2006	60/826,288		KNOWLEDGE BASED ENGINEERING SYSTEM