FPCM

First Principles Capital Management, LLC

Corporate Credit Profile

February 2014

TENNECO

Tenneco Automotive (TEN)

Business Profile

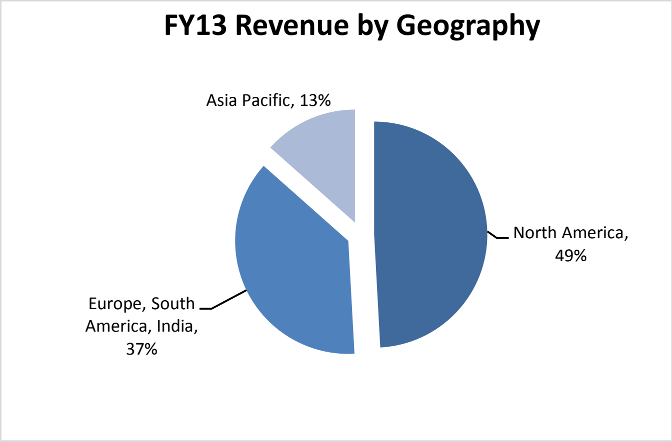
Tenneco Inc. (TEN) is a global Tier 1 manufacturer of automotive emission control and ride control products for light, commercial, and specialty vehicles to both OEMs and the aftermarket.

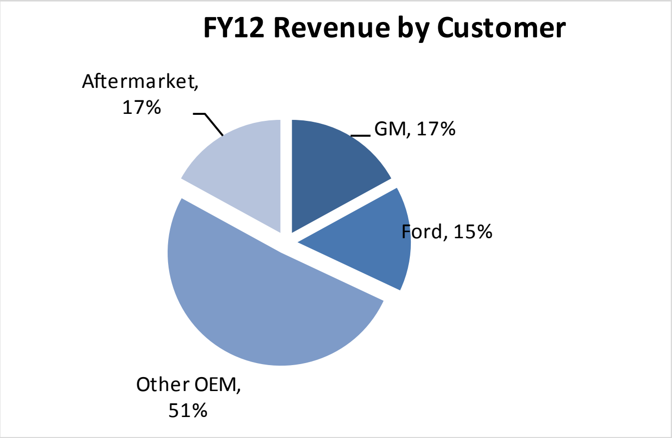
Roughly 83% of sales are to OEMs, with 17% to the aftermarket. Tenneco's largest customers include General Motors (17% of revenue) and Ford (15%), followed by Volkswagen (8%), Daimler (6%), and Toyota (4%). Within the aftermarket, the largest customers are NAPA (National Auto Parts Association), Advance Auto Parts, and O'Reilly Automotive.

S&P: BB/Positive

Moody's: Ba3/Positive

Emissions Control (68% of FY13 revenue) – in this segment, TEN's products direct noxious exhaust gases away from the passenger and reduce the level of pollutants and engine exhaust noise. This segment designs, manufactures, and distributes catalytic converters, diesel oxidation catalysts, diesel particulate filters, etc. TEN has been making a big push into commercial vehicles as emission regulations have tightened.





Source: Company Reports

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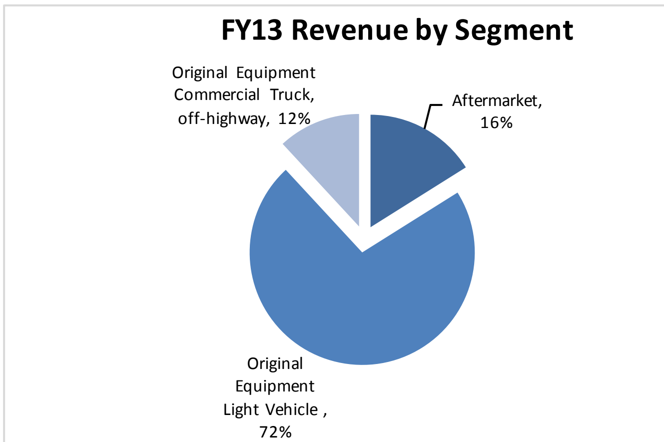
Ride Control (32% of FY13 revenue) – In this segment, TEN's offerings deal with a vehicle's suspension system and therefore the vehicle's handling. Products include shock absorbers, and vibration control components among other products.



Source: Company Reports

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Industry Update

In 1Q14, IHS Automotive projects that industry light vehicle production in the regions where Tenneco operates will increase by 6% yoy. North America light vehicle production is expected to be up 6%, Europe up 4% and China up 12%. Light vehicle production in India and South America is expected to be down 9% and 1%, respectively.

North America & Europe

2013 light vehicle SAAR (seasonally adjusted annual rate) came in at 15.4 million units, a modest increase from its 15.2 million level a year ago, and lower vs. November SAAR level of 16.3 million units. While sales in December increased less than 1%, this was largely due to challenging weather in several regions in the U.S., as well as a stronger than expected November.

The North American market seems to have further room for improvement with overall days supply remaining relatively low (64-day supply at YE2013, expected to increase to 90-day in early in 2014 as automakers build supply ahead of upcoming new product launches).

Throughout 2014, OEMs will need to manage expectations against a more modest growth year and comparisons with a high 2013. IHS Automotive forecasts 2014 sales to reach 16 million units, and forecasts 2.1% growth in GM (TEN's largest client) light vehicle production in FY14 vs. FY13.

Automotive North American & European Light Vehicle Production FY11-FY14E [1]

	FY11	FY12	FY13	FY14E	FY15E
GM	3,084	3,233	3,289	3,359	3,496
YoY % Change		4.8%	1.7%	2.1%	4.1%
Ford	2,722	2,842	3,080	3,057	3,192
YoY % Change		4.4%	8.4%	-0.7%	4.4%
Total North America	13,126	15,434	16,184	16,834	17,285
YoY % Change		17.6%	4.9%	4.0%	2.7%
Europe - Eastern & Western	20,182	19,298	19,331	19,576	20,366
YoY % Change		-4.4%	0.2%	1.3%	4.0%

[1] Production in thousand units

Source: Goldman Sachs Research

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Industry Update

Global Emissions Regulation Timeline

CVS - Commercial Vehicle Systems LVS - Light Vehicle Systems * Phased in ** Estimated date

	2010	2011	2012	2013	2014	2015	2016	2017	2018
U.S.	US-10 CVS On-Highway Motorcycle Rule Tier 2	US Off-Road Tier 4i*	CA CVS Retrofit*	RICE Stationary US revised NAAQS	US Off-Road Diesel Tier 4f* Locomotive & Marine Tier 4* CA LEV III US Utility MACT		US Fed Tier 3 LVS*,** NSPS Stationary NOx*	US Fed Tier 3 Light Truck*,**	CA CVS On-Highway**
Europe	NL Marine OE/Retrofit PM 2.5 & NO_2 limits	EU Off-Road Stage 3B EU CO_2/GHG 120g PM # LVS	Motorcycle Euro 4	Euro-6 CVS EU Sound regulation	EU Off-Road Stage 4 Euro-6 LVS	Motorcycle Euro 5**		Euro-6 LVS Final PM# Euro-6.2 LVS**	
China	Euro-4 LVS		Euro-5 LVS	Euro-4 CVS Beijing Euro-5 CVS		Euro-5 CVS**			Euro-6 CVS** Off-Road Stage 3B** Locomotive**
Japan		NOx reductions LVS		JP-13 CVS			JP-16 CVS*		
South America			Brazil: Euro-5 CVS	Chile: Euro-5 LVS			Brazil: Euro-6 CVS**		Brazil: Off-Road Stage 3B**
Russia				Euro-4 LVS/ CVS		Euro-5 LVS/ CVS			
India	Euro-4 LVS Motorcycle Rule*	Euro-4 CVS 11 Cities			Euro-5 CVS**				

Source: Company Reports

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Interim Results

FY13 (YE 12/30):

TEN posted solid results in FY13. Revenue increased by 8.2% yoy and reached its highest level to date, capitalizing on stronger global light vehicle volumes, and a fast growing commercial business (+17.7% growth yoy). Light vehicle sales increased 8.3% yoy, outpacing global industry light vehicle production growth (+4.5% in North America, and flat in Europe), and is expected to contribute more strongly in 2014. The outperformance relative to industry production was partly driven by new content for several clients including GM. Of note, aftermarket growth turned positive in FY13 (+1.4% vs. -3.5% in FY12).

EBITDA grew by 10%in FY13. Growth accelerated notably in 2Q13 (+7.7% yoy), and continued to accelerate through the end of the year (3Q13: +10.4% yoy; 4Q13: +15.9% yoy).

TEN has improved its cost structure over time, allowing stronger incremental margins as production volume recovered. The European operating margin recovery has lagged North America, as fixed costs are higher in Europe than in North America, and less was done in the region during the 2008 restructuring. However, in 2013 the company completed its European restructuring program, which aims to deliver $60 million of annual savings by 2016.

Revenues [$mm] and EBITDA

	2008	2009	2010	2011	2012	2013
Revenue	**5,916**	**4,649**	**5,937**	**7,205**	**7,363**	**7,964**
% Total Growth	**-4.3%**	**-21.4%**	**27.7%**	**21.4%**	**2.2%**	**8.2%**
Adj. EBITDA	381	354	528	615	646	709
Adj. EBITDA growth	-22%	-7%	49%	16%	5%	10%
EBITDA margin	6.4%	7.6%	8.9%	8.5%	8.8%	8.9%
Net Income	**-415**	**-73**	**39**	**157**	**275**	**183**

Source: Company Reports

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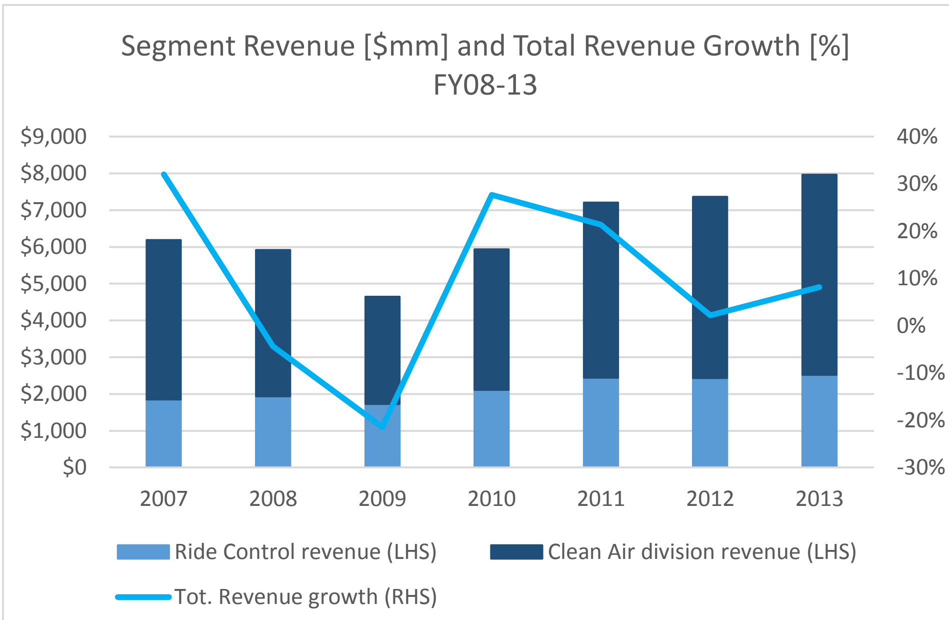

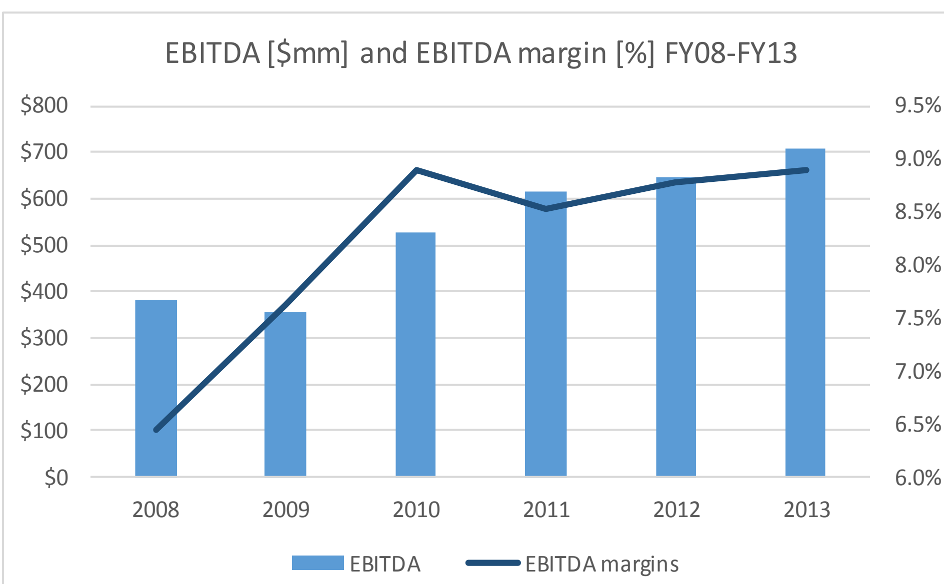

Source: Company Reports

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Capital Structure and Liquidity

TEN's financial profile has improved in the last few years. Over time, the company has simplified its debt structure, eliminating second lien and subordinated notes and extending maturities.

The company exhibits solid liquidity of $1 billion with $275 million in cash and $792 million of availability under its $850 million revolver, almost covering TEN's entire debt of $1.1 billion.

TEN's leverage is low at 1.6x, and there are no debt maturities before 2017. The company can comfortably service its debt with EBITDA that covers interest over 8 times. In 2012, TEN improved its debt service profile with the redemption of its 8.125% notes using proceeds from its amended bank credit facilities.

Management recently reiterated its commitment to achieving a 1.0x net leverage and maintaining that ratio for long-term financial stability through cycles, and indicated that they would only consider returning capital to shareholders after achieving the 1.0x target, but expect these activities to remain minimal.

Since the last economic recession that hit the company in 2008, TEN has improved its free cash flow generation to $259 million in FY13.

TEN Capitalization [$mm]	FY 2013	Debt/LTM EBITDA
$850 million Revolving Credit Facility (L+250) due 2017	58	
Term Loan A due 2017 (L+250)	228	
7.75% Senior notes due 2018	225	
6.875% Senior notes due 2020	500	
Other (incl. foreign lines of credit)	91	
Total Debt	**1,102**	**1.6x**
Cash	275	
Net Total Debt	827	**1.2x**
FY 2013 EBITDA	709	

Note: Covenants: Max LTM net leverage of 3.5x, and max LTM interest coverage of 2.55x through 12/31/13, and 2.75x thereafter

Source: Company Reports

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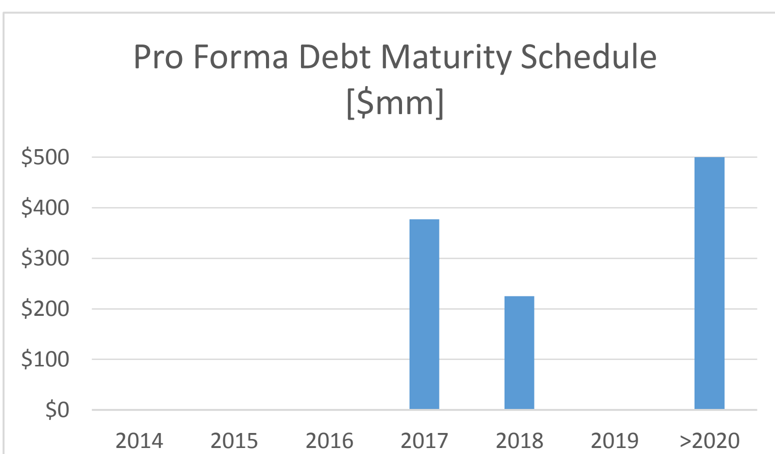
Capital Structure and Liquidity

Liquidity [$mm]	2008	2009	2010	2011	2012	2013
CFO	160	241	244	245	365	503
Total Capex	(233)	(120)	(151)	(213)	(256)	(244)
FCF	**(73)**	**121**	**93**	**32**	**109**	**259**
Dividends [1]	(13)	(10)	0	0	(29)	(39)
Share Repurchases	0	0	0	(16)	(18)	(27)
Net FCF	**(86)**	**111**	**93**	**16**	**62**	**193**
$850 million Revolving Bank Facility						792
Cash						275
Marketable securities						0
Liquidity						**1,067**

Metrics [$mm]	2008	2009	2010	2011	2012	2013
Capex as % sales	3.9%	2.6%	2.5%	3.0%	3.5%	3.1%
Total Debt	1,451	1,220	1,223	1,224	1,180	1,102
Total Leverage (Debt/EBITDA)	**3.8x**	**3.5x**	**2.3x**	**2.0x**	**1.8x**	**1.6x**
Total Debt/Capitalization	**120.9%**	**101.8%**	**100.3%**	**100.0%**	**82.7%**	**71.8%**
Total CFO as % of Debt	11.0%	19.8%	20.0%	20.0%	30.9%	45.6%
Total FCF as % of Debt	**-5.0%**	**9.9%**	**7.6%**	**2.6%**	**9.2%**	**23.5%**
Market Capitalization						3,670
Enterprise Value						4,500
EV/LTM EBITDA						**6.3x**

[1] Distribution to noncontrolling interest partners



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Strengths & Opportunities

Positive Secular Industry Trend. TEN has a large commercial vehicle emissions opportunity driven by tighter emissions regulation. The company should be well positioned to capitalize on the growth given the relatively small amount of players, its core competency in emissions, and its long term relationships with commercial vehicle OEMs.

Strong competitive position. TEN is one of three major players (along with Faurecia and Eberspacher) in light vehicle emission control, and one of four players for commercial vehicles (with the addition of Cummins). TEN has a leading position in North America and is the #2 player in Europe, China, and South America.

Since the growth in the commercial segment is secularly driven by emission regulations, TEN is less dependent on a cyclical commercial vehicle recovery than some other commercial vehicle suppliers. The commercial vehicle opportunity is margin accretive, and production for commercial vehicle OEMs has proven to be more standardized than for light vehicles. Also, commercial vehicle products carry an above-average contribution margin.

Strong liquidity and low leverage. The company maintains strong liquidity of $1 billion. Cash flow generation over the past few years has been fairly stable, and free cash flow (before dividends and share repurchases) more than doubled in FY13. To date, shareholder friendly activities have remained modest ($66 million in FY13), and management does not intend to increase leverage to finance shareholder-friendly activities. The company has steadily lowered its leverage ratio from a peak leverage of 3.8x in FY08 to 1.6x in FY13, and indicated that it would like to operate at a long term level of 1.0x net leverage.

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Weaknesses & Threats

Exposure to highly cyclical industry. Demand in the automobile market is volatile, and suppliers generally have limited pricing power, however TEN's business model is somewhat less cyclical compared to the industry overall, growing at above industry growth rates for the past few years. While the after-market business is still relatively small (17% of revenue), compared to original equipment (OE) sales, the business does provide some degree of counter-cyclicality. Aftermaket sales are generally less adversely affected than OE sales. When new vehicle sales and production slow, consumers extend the lives of their vehicles, increasing demand for replacement parts.

Weakness in European market. Growth in the North American region (about half of TEN's revenue) is expected to continue to mitigate economic pressures in Europe (Europe, South America, and India represent 10% of revenue). In particular, tightening regulatory standards, including the coming US Tier 4 final and Europe Stage 4 off-road emissions regulations in 2014, should continue to drive growth in TEN's Clean Air division. This is already evidenced by the growth recovery in the light vehicle European/South American/Indian segment (+6.3% in FY13, from negative growth of 7.7% in 2012).

Volatility in commodity prices. TEN is subject to volatility in commodity prices, most notably steel. Raw material costs represent ~55-60% of COGS. However, TEN has historically been able to offset the impact of higher raw material cost, with some contracts having pass-through arrangements. Further, steel prices remain manageable given global oversupply.

Event risk. Appears to be moderate, despite the possibility for tuck-in acquisitions. Management has indicated several times that M&A other than tuck-in acquisitions are highly unlikely. TEN competes with a few regional players, and is #1 or 2 in most markets is serves around the globe.

Pricing pressure. As with every supplier, TEN faces pricing pressure given the OEM's buying power.

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Outlook

Management provided a positive FY14 outlook, with expected sales growth of 7-11% yoy, above expected industry growth. Management reiterated on the last earnings call its commitment to achieving a 1.0x net leverage and maintaining that ratio for long-term financial stability through cycles, indicating that they would only consider returning capital to shareholders after achieving the 1.0x target.

Credit View

The company exhibits a good credit profile supported by a conservative financial profile, improving cash flow generation and solid liquidity.

The company's management team has done an admirable job at operating the company through the last downturn, and diversifying the business into the commercial vehicle market over the past year or so. Since the last recession, TEN's performance and margins have substantially improved, supported by continued strong performance of its North American operations underpinned by higher volume and a leaner cost structure.

The global trend toward stronger regulation of vehicle tailpipe emissions provides TEN with an attractive above industry growth story over the long run. We also view positively the diversity across geography, product and market segments. Further, as the global commercial vehicle markets recover, TEN's aggressive expansion into this market should pay off, and margins in this segment should benefit from greater capacity utilization.

Both agencies have placed the company on watch for an upgrade, and we believe that this would be granted over time as the company further strengthens its cash flow position and credit metrics.

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Credit View and Relative Value

Coupon	S&P Rating	Moody's Rating	Issue	Maturity	Callable	Call Price	Amount	Price [1]	YTW	Z-spread
6.875%	BB-	B1	Sr Notes	12/15/20	12/15/15	103.0	500	110.75	2.60%	221.6

[1] BofA price 2-21-14

We see some potential for spread compression given the continued improvement in TEN's credit metrics, and likely upgrade by the rating agencies (mostly contingent upon improving cash flow generation). TEN 6.875% bond due 12/15/20 currently yields 2.6% with Z-spread of 222) appears attractive based on relative value.

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Valuation

Data Annex 1

Peer Analysis [$mm]	S&P Rating	Market Value	Enterprise Value	Sales	EBITDA	EBITDA Margin	Debt	Debt/EBITDA	Ent. Value/EBITDA
Tenneco	BB/Stable	3,670	4,500	7,964	709	8.9%	1,102	1.6x	6.3x
Meritor, Inc.		1,180	2,010	3,720	230	6.2%	1,140	5.0x	8.7x
Dana Holding		3,130	3,360	6,770	698	10.3%	1,620	2.3x	4.8x
American Axle & Manufacturing		1,490	3,210	33,690	2,810	8.3%	1,620	0.6x	1.1x
Average		2,368	3,270	13,036	1,112	8%	1,371	2.4x	5.3x

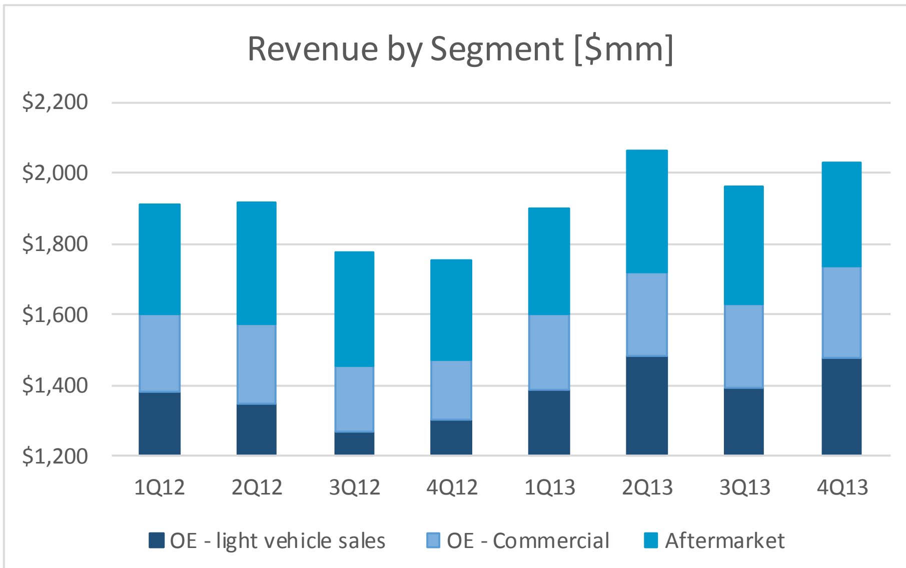
Source: Yahoo Finance

Stock Price

Price $60.70

YTD Change
+9.25%

Data Annex 2 – Revenue Analysis



YoY revenue Growth	1Q12	2Q12	3Q12	4Q12	1Q13	2Q13	3Q13	4Q13
OE - light vehicle sales	1,379	1,350	1,270	1,301	1,388	1,483	1,394	1,477
OE - Commercial	222	226	184	172	213	237	236	260
Aftermarket	311	344	324	280	302	347	333	294
Total Revenue	**1,912**	**1,920**	**1,778**	**1,753**	**1,903**	**2,067**	**1,963**	**2,031**
YoY total revenue growth					-0.5%	7.7%	10.4%	15.9%

Source: Company reports

Data Annex 3

Costumer Concentration

Customer Concentration as % of total 2012 revenue	%
GM	16.9%
Ford	14.6%
Volkswagen	7.6%
Daimler	6.2%
Toyota	4.4%
SAIC	3.0%
Chrysler	2.6%
Caterpillar	2.6%
FAW	2.2%
Navistar	1.9%
NAPA	1.8%
PSA Peugot Citroen	1.7%
BMW	1.6%
Nissan	1.6%
Advance Auto Parts	1.4%
O'Reilly Auto Parts	1.2%
Changan	1.2%
Volvo	1.1%
TATA Motors	1.0%
Uni-Select	1.0%
Total Top 20 Customers	**75.6%**

Significant Emissions Regulations Phase-in

	2011	2012	2013	2014	2015	2016	2017
• U.S.	Tier 4I Off-road (2011–2013)			Tier 4f Off-road (2014–2015)		U.S. Fed Tier 3 (2016–2017)	
				Locomotive & Marine Tier 4 (2014–2017)			
• Europe	Stage 3B Off-road (2011–2013)			Stage 4 Off-road (2014–2015)			
			Euro-6 On-road (2013–2014)				
• China			Euro-4 On-road		Euro-5 On-road		
• Brazil		Euro-5 On-road					

Source: Company reports

Disclosure

Additional information is available upon request. Information has been obtained from sources believed to be reliable but First Principles Capital Management, LLC or its affiliates (collectively “FPCM”) do not warrant its completeness or accuracy except with respect to any disclosures relative to FPCM and the analyst's involvement with the company that is the subject of the research. All pricing is as of the close of market for the securities discussed, unless otherwise stated. Opinions and estimates constitute our judgment as of the date of this material and are subject to change without notice. Past performance is not indicative of future results. This material is not intended as an offer or solicitation for the purchase or sale of any financial instrument. The opinions and recommendations herein do not take into account individual client circumstances, objectives, or needs and are not intended as recommendations of particular securities, financial instruments or strategies to particular clients. The recipient of this report must make its own independent decisions regarding any securities or financial instruments mentioned herein. Periodic updates may be provided on companies/industries based on company specific developments or announcements, market conditions or any other publicly available information.