

# Newsletter

## Merry Christmas and Happy New Year

We would like to wish all of our customers a Merry Christmas and a very Happy New Year. From every member of the FAI team and board of Directors, we thank you for the continued business and loyalty throughout 2017. We are currently undergoing an exciting transformation in most areas of our business so keep up to date by following us on social media. Here are some interesting highlights from the last year:

**10,000+**

Lines of vehicle data added to cataloguing platforms each month.

**1,000+**

New to Range products added to stock.

**250,000+**

Average units sold per month.

**1,000,000+**

Visits to [catalogue.faiauto.com](http://catalogue.faiauto.com)

**600+**

New social media followers.

**3**

New product ranges added.

**94%**

Positive Overall Customer Survey Score.

**Range**  
Development

The area our customers feel we excelled this year.

**25+**

Trade exhibitions attended worldwide.



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# Newsletter

## Vehicle of the Month

### Mercedes E-Class 2009 - 2016

The Mercedes-Benz E-Class (W212 and S212) series represents the **fourth-generation of the Mercedes-Benz E-Class range of executive cars**. The E-Class image suffered a downturn in the late 1990s and early 2000s. The W212 series took the E-Class's original reputation for **solid build quality and refined elegance** and established it once again. It is also praised for having a differentiated design from the C-Class and S-Class models.


[VOTM Web Page](#)
[VOTM Leaflet](#)

## Christmas Order Cut-Off

### UK Customers

Order Date	Status	Cut Off	Delivery Date
22nd December	Open	4:45pm	27th December
25th December	Closed		
26th December	Closed		
27th December	Open	4:00pm	28th December
28th December	Open	4:00pm	29th December
29th December	Open	3:00pm	2nd January
2nd January	Open	Business as usual	

### Export Customers

Orders must be sent **before 11th December** at the very latest to ensure goods are received BEFORE Christmas.

The export office will be **closed from the 23rd December** and will return to business as usual on the 2nd January. Any requests sent over this time will not be looked at until the 2nd January.

## Engine of the Month

The new generation RF-based **MZR-CD 2.2-litre turbo diesel engine** replaces the existing MZR-CD 2.0 RF and is due to totally replace RF 2007 and RF 2005 in the near future. We offer a **comprehensive range of components** for this popular engine; from Gaskets and Seals to the Timing Chain Kit.

[EOTM Web Page](#)
[EOTM Leaflet](#)


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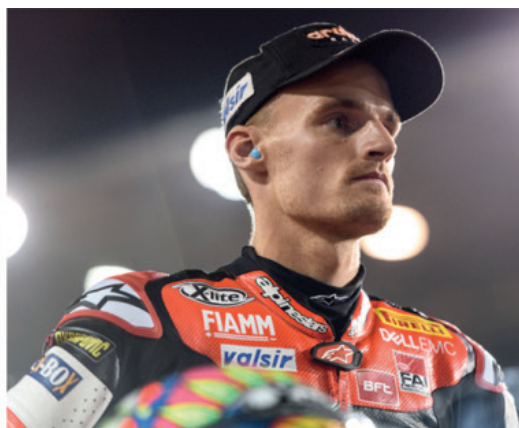
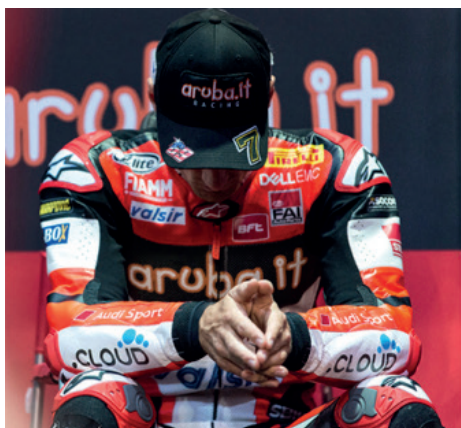
# Newsletter

## SBK<sup>™</sup> 2017 Season Finale SUPERBIKE FIM WORLD CHAMPIONSHIP

### 2017 Season Finale ROUND 12 - Qatar



Entering the final round of the WorldSBK 2017 Season, FAI's Brand Ambassador was ready for a fight and that's exactly what he gave 'em. Second in both night races, **Chaz secured his goal of championship second place** despite a very wobbly turn 5 in the second race. The final round kicked off with a bustle of final preparation as the sun goes down and the floodlights set the atmosphere. **Chaz knew the importance of every element of the day especially as he was to start on the third row.** Showing he meant business by taking second place after a series of lightning overtakes, it was clear the Welshman wasn't backing down. Creating the gap required to ensure a podium finish, Chaz was one step further towards overall second.



*"I'm happy because we achieved our main task, which was to gain some points in the fight for second position in the championship, but honestly it was a tough race...we took second place and we're happy to get 20 points in the bag and a lot of useful data ahead of tomorrow to improve with the electronics and especially engine brake. We need to stay focused and hopefully we'll make another couple of steps forward for Race 2."*

Chaz threw himself in to the second race with a blistering start, taking the lead in turn one. **He then gave us all a heart-stopping moment when he almost lost control** "rodeo" style on turn five. Again, Davies preformed incredibly well throughout the final race of 2017, flying through the chequered flag in second, thus achieving his goal.

*"We sealed second position in the championship, which was our goal going into this round, so I'm very happy. It's been another tough race. I probably made the best start of my career, then got my head down while keeping an eye on Sykes' position. I nearly crashed at turn 5, it felt like a rodeo but we hung on to it. Once I saw Sykes was out, I just tried to control the gap as second place was the best we could do today. Thanks to Ducati and Aruba.it for another exciting season, I'm looking forward to 2018."*

We look forward to the 2018 season with the real possibility of Chaz obtaining a Championship win.



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# Newsletter

## Tech Corner: Oil Contamination

Contrary to popular belief, timing chains do not “stretch” due to poor maintenance, the factory set clearances between the internal diameter of the roller and the link pins increase making the chain appear to stretch. The **most common cause of wear of the pin and/or the internal diameter of the bush is degraded oil**. The degradation manifests in several ways, the most common being fuel dilution and metallic or silicon (dirt) particles suspended in the oil which have built up over time.

Maximum Contaminant Levels	Metal Units (PPM)									
	Fe	Cr	Pb	Cu	Sn	Al	Ni	Si	B	Na
Diesel Engine	100	25	25	40	20	30	10	15	20	75
Petrol Engine	600	50	100	75	40	75	15	60	75	100
Transmission	500	10	50	300	20	50	20	40	20	75
Hydraulic	75	5	20	50	10	50	5	20	20	75
Differentials	750	19	100	400	30	50	10	75	10	50



If the fuel exceeds 5% or the number of metallic particles exceeds 100ppm (parts per million) or silicon exceeds 15ppm the oil is deemed to be hostile, **no longer providing protection to the moving parts of the engine**. This hostile environment actively promotes rapid wear. In turn, the chain will elongate until eventually the tensioner is at its maximum and no longer able to apply vital working tension to the chain. On a chain of 120 links, as little as 4mm “stretch” can render the chain useless.

**It is therefore vital that when the chain kit is replaced, the following actions must be taken:**

1. Flush engine oil system before dismantling the TCK.
2. Always use the approved locking tools.
3. Remove sump and rocker cover to check for any damage. (Replace any damaged parts)
4. Remove and inspect oil pump and pick up pipe. Clean thoroughly and replace is required.
5. Check all oil galleries and oil feed holes to ensure there are no blockages.
6. Refill engine with manufacturers recommended grade of oil.
7. Replace oil filter.

An example laboratory report (results on the right) for a returned timing chain kit showed classic wear of the internal diameter of the roller bushes, which had **taken the clearance/tolerances of the chain beyond the maximum permissible**. This “stretch” meant that the tensioner was unable to apply working tension to the chain assembly, causing the noise the driver reported.

	Maximum PPM	Sample PPM
Fe (Iron)	100	488
Cr (Chromium)	25	36
Pb (Lead)	25	0
Cu (Copper)	40	6
Sn (Tin)	20	0
Al (Aluminium)	30	13
Ni (Nickel)	10	3
Si (Silicon)	15	58
B (Boron)	20	34
Na (Sodium)	75	38

**Had the engine been thoroughly cleaned during the installation, this particular failure would have been prevented.**



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## Steering & Suspension Update

During the month of November we have added **32 new steering and suspension** part numbers for **some of the most modern vehicles** on the road. Stay tuned over coming months as we are expecting hundreds of new references to range. Please consult our monthly new to range spreadsheet for more information. **Below are our highlights:**



SS9291



SS9381



SS9384



SS9260

SS9291 / SS9292	TOYOTA RAV 4 IV 2013-2016	Lower Wishbone Left / Right
SS9381 / SS9382	FORD TRANSIT (V347-348) 07/2006 -	Wishbone Left / Right
SS9384 / SS9385	VAUXHALL ASTRA VII (K) 2015-	Front Link Rod Left / Right
SS9260	VAUXHALL COMBO 2001-2012	Rack End

Along with the **top 50 selling NEW** steering and suspension items list that is available as part of our **monthly New to Range file**, we have also looked at our **top pareto climbers from the last year**. These are parts that are not necessarily new but are a selection that have **jumped the most in sales** over this period:



SS2761



SS6221



SS4963



SS2757

SS2761 / SS2762	Wishbone L/R	Ford Fiesta 2008-
SS6221	Front Link Rod	Ford Fiesta 2008-
SS2780 / SS2781	Front Link Rod L/R	Nissan Qashqai 2007-
SS4963 / SS4964	Wishbone Bush Front Rearward L/R	Mini one 2001-
SS2757 / SS2758	Tie Rod End L/R	Ford B Max 2012-



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## Mercedes Steering - New to Range

Mercedes have introduced some stylish new models to their range and FAI would like to announce **30 new part numbers in stock** for popular Mercedes applications. Exciting parts for some of the latest models which include the highly popular Mercedes C Class, the stylish new GLE and GLS models and the convenient Mercedes V-Class/Vito.

### MERCEDES VITO (W447) 2014-

SS9347	RACK END	<b>Exclusive to FAI</b>
SS9457	WISHBONE LEFT	
SS9458	WISHBONE RIGHT	
SS9459	LOWER BALL JOINT	
SS9263	TIE ROD END LEFT	



### MERCEDES BENZ C CLASS (W205) 2014-

SS9270	WISHBONE BUSH	<b>Exclusive to FAI</b>
SS9313	CONTROL ARM BUSH	
SS9314	CONTROL ARM BUSH	
SS9318	CONTROL ARM BUSH	



### MERCEDES GLE CLASS (166) 2015-

SS9274	WISHBONE BUSH	<b>Exclusive to FAI</b>
SS9275	WISHBONE BUSH	
SS9276	WISHBONE BUSH	
SS9277	WISHBONE BUSH	



For more information including the full Mercedes new to range offer, [CLICK HERE](#) for the leaflet.



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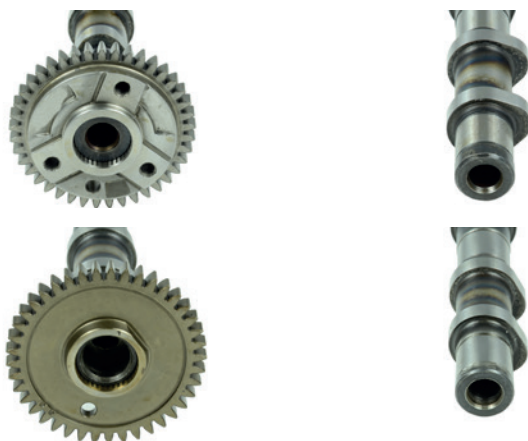
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# Newsletter

## Featured Parts

### Exclusive - C381 / C382



FAI are first in the market to offer these **BMW 2.0d N47 Series 2007 - 2014** inlet and exhaust camshafts.

### Exclusive - TCK297VVT



This **Toyota Prius/Yaris/Vitz 1.5 Hybrid 2003** Timing Chain Kit is exclusive to FAI with the VVT hub and gaskets/seals for installation.

### Top Seller - WP6558

FAI are one of few aftermarket brands to offer this popular **VAG 1.4 TSI / TFSI and 2.0 TDI Water Pump**. Due to the technical nature of the electro-magnetic clutch on this twin charger pump, it took considerable development time. **It is now our top selling water pump and is definitely recommended for stock holding.**



### Exclusive - TCK42CRD-10



This **Nissan Navara 2.5TD (YD25DDTi) 01/2010** common rail diesel Timing Chain Kit is exclusive to FAI and includes all the necessary parts for fitment.



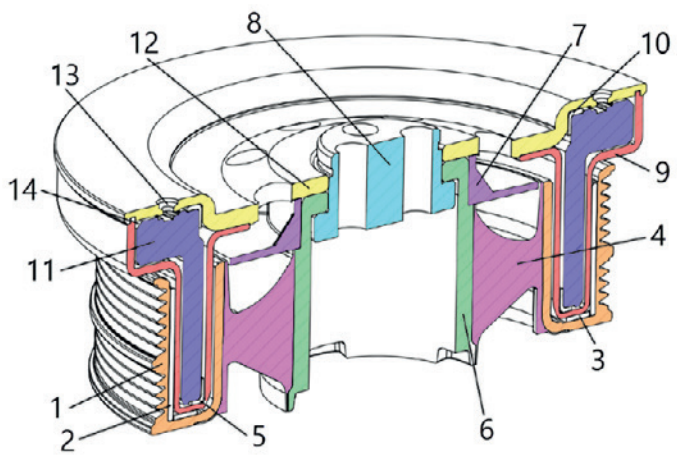
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# Newsletter

## Viscous Vibration Dampers



- |                          |                         |
|--------------------------|-------------------------|
| 1. Groove                | 8. Inner Hub            |
| 2. PTFE Bushing          | 9. Inertia mass housing |
| 3. Plastic Bushing Plate | 10. Slide Bearing       |
| 4. Rubber                | 11. Inertia mass        |
| 5. Slide Bearing         | 12. Cover               |
| 6. Main Hub              | 13. Viscous Fluid hole  |
| 7. Propeller             | 14. Viscous fluid gap   |

FAI recently introduced a range of 40+ Torsional Vibration Dampers, each using various designs depending on application requirements. **FVD1035, which is used on a lot of 3.0d BMWs, is one of the latest generation viscous couplings.** In this article, we summarise what viscous dampers are and why they are used. **For the full article, [CLICK HERE](#).**

A viscous damper has a sealed outer housing with a precision machined hub. Inside of the housing is an inertia ring with a viscous fluid (specialised silicone) filling the cavity. **The temperature range is -40 to 300 Fahrenheit meaning it can be used in very extreme temperature conditions and it remains an excellent dissipater of heat.** Heat is a by-product of damping harmonics and dissipating that heat away from the damping medium is critical for proper functioning of the damper over time.



As a vibration event happens it causes the outer housing and inner inertia ring to rotate independently at different speeds. The resulting shear action through the viscous fluid diminishes the vibration by transforming it to heat. **Silicone has proven to be an excellent damping medium** because it contributes to long damper life by exhibiting:

- High energy dissipation
- High tensile strength
- Effective across a broad range of frequencies and RPMs.
- High operating temperature range.

To read the full article, please [CLICK HERE](#).



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