

Car drivers in Istanbul, Mexico City and Moscow top the STOP-START Index with the most stop-starts globally

1st October, 2013: The latest research from Castrol and TomTom has revealed drivers in Istanbul could experience 31,200 stop-starts a year, compared to the lowest ranked city, Rotterdam, where drivers might only experience 6,211 stop-starts, more than 24,000 fewer.

The study was carried out for Castrol by TomTom, using information from its satellite navigation systems on vehicles in 50 cities worldwide. The goal was to highlight the pressures that changing driving conditions place on vehicles across the globe.

Other cities in the study include Beijing with 28,200, London with 21,000 stop-starts, New York with 15,480, and Sydney with 13,200. Stop-start driving can increase microscopic wear in car engines and Castrol's studies have shown that even a normal driver can experience as many as 18,000 stop-starts every year.

According to Castrol engineers, frequent stop-starts can cause increased wear to a car engine. The number of stop-starts reflect the driving conditions and situations drivers are facing in each market. These results show the size of the stop-start problem and indicate that precautions are necessary, one of the reasons why Castrol commissioned this study.

Castrol have identified three levels of stop-start driving, Green, Amber and Red (detailed below). Amber and Red warn drivers of heavy stop-start conditions which are likely to bring about serious stop-start wear to the engines. They will trigger drivers to take appropriate actions to fight against stop-start wear and protect their engines every time they start.

- **GREEN:** Moderate level of stop-start driving, as drivers are experiencing less than 8,000 stop-starts per year. Recommend drivers to take necessary precautions against stop-start engine wear.
- **AMBER:** Heavy level of stop-start driving, as drivers are experiencing 8,000 stop-starts or more per year. Drivers should take actions to protect against stop-start engine wear.
- **RED:** Severe level of stop-start driving, as drivers are experiencing 18,000 stop-starts or more per year. Drivers should take actions to protect against stop-start engine wear.

The project highlights stop-start driving, including traffic, urbanisation, and short journeys experienced in each area. Data from vehicles and trips within a region and time span was aggregated by TomTom, total driven kilometres and total number of stops calculated, and an average number of stops per driven km per region derived.

Gareth Bracchi, Senior Development Technologist at Castrol, said:

"This project confirmed that drivers were making lots of stop-starts in their vehicles. In fact the numbers of stop-starts per year far exceeded our initial expectations – almost double in some cases! This highlighted that there are many more drivers out there that need the stop-start wear protection of Castrol MAGNATEC STOP-START."

Ralf-Peter Schäfer, Head of Traffic at TomTom, said:

"The results from the Index are fascinating and working with Castrol to produce the Index has been very revealing. Istanbul's highest stop rate among the big cities corresponds to its very high congestion level, followed by Moscow and Mexico City, certainly founded by heavy daily congestion as well. Traveling in Rotterdam however goes along with the lowest stop rate as the city has moderate congestion."

Please check out the Castrol MAGNATEC STOP-START Index report [here](http://magnatec.castrol.com/campaigns/stop-start-index.html) to see where your local city stands globally. For more information on the methodology of the study and implications of stop-starts on your engine, please visit <http://magnatec.castrol.com/campaigns/stop-start-index.html>

Castrol MAGNATEC STOP-START Index

City	Total number of stops	Average number of stops per vehicle per year
Istanbul	21,596,566	31,200
Mexico City	17,999,273	30,480
Moscow	1,385,513	29,520
Beijing	64,941	28,200
Saint Petersburg	429,908	28,080
Rome	30,513,339	28,080
Jakarta	522,073	28,080
Bangkok	309,197	26,040
Shanghai	252,607	24,960
Surabaya	31,196	24,360
Guadalajara	2,712,922	24,360
Milan	25,534,082	23,040
Buenos Aires	9,983,192	22,920
Manchester	10,521,105	22,680
Madrid	42,485,068	22,320
Amsterdam	14,633,252	22,320
Sao Paulo	102,189,603	22,200
London	225,644,745	21,000
Barcelona	41,199,071	20,400
Kaohsiunga	2,150,839	20,280
Taipei	8,113,321	20,040
Johor Bahru	467,398	19,800
Hong Kong	862,288	19,680
Cordoba	473,588	18,120
Ankara	5,963,224	17,880
Paris	296,090,725	17,520
Phuket	18,391	17,400
Warsaw	7,075,404	16,200
Rio de Janeiro	19,517,721	16,200
Berlin	48,478,293	16,200
New York	62,028,327	15,480
Krakow	2,298,441	13,800
Stockholm	5,110,227	13,680
Singapore	9,610,879	13,680

Sydney	45,550,971	13,200
Vancouver	7,216,008	12,600
Lyon	26,042,523	10,920
Hamburg	28,564,290	10,800
Dubai	282,844	10,200
Kuala Lumpur	1,798,523	9,960
Johannesburg	40,088,722	9,840
Wellington	956,014	9,480
Auckland	6,466,118	9,360
Los Angeles	17,898,857	9,000
Melbourne	35,979,611	8,760
Cape Town	9,699,280	8,760
Toronto	20,024,752	8,520
Goteborg	1,849,933	7,800
Abu Dhabi	169,795	6,840
Rotterdam	16,180,627	6,120