

E10 Updated

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Cleaning DfT/DVLA data and isolating E10 compatible cars

This report describes how the impact of a switch to E10 is modelled using data on GB licenced petrol and LPG cars, and presents the results of that analysis.

Bespoke DfT tables of DVLA data are used (taken from end of June 2014, 2015, 2016 and 2017). This is the number of petrol/LPG cars (i.e., all cars that use petrol in some way) currently licenced in each upper tier local authority, for each unique make, model, specific model, engine capacity and fuel type at each of those points in time.

The DVLA data is known to have errors, most notably category errors, where a bus is listed as a car, or similar. There are also some clear errors of listed engine capacity. It is therefore important to clean the data, and remove the most obvious category errors (models or manufacturers that cannot be considered “cars”). Some errors will remain, most probably in the engine capacity field, where the range suggests some likely errors (from 0cc to 99999cc), and in vehicles made by manufacturers who produce both cars and motorcycles (e.g., BMW, Honda, Suzuki, Triumph). There may be other errors with incorrectly registered dates of manufacture.

After cleaning, 24.99 million observations remain - or 99.963%. This amounts to 18.88 million vehicles in June 2017, or 99.988%. 2353 vehicles were removed from the June 2017 data. Some errors will remain, of course.

Using consumer information from France, Germany, Finland and ACEA, each vehicle was categorised as either E10 compatible (“TRUE”) or incompatible (“FALSE”). E10 incompatible, in this case, includes vehicles where there is no information available or the manufacturer is no longer a functioning business. Compatibility was determined using a risk-averse strategy - only cars explicitly compatible were classed as such. Date of first registration was taken as a proxy for date of manufacture, and kit car manufacturers were classified as E10 incompatible. Where a vehicle modification was recommended by the manufacturer to ensure compatibility, it was assumed the vehicle owner would get such a modification to their vehicle. In the case of the Seat Ibiza, this paper assumes all Ibizas are compatible from 2002.

It should be noted that in the process outlined in *E10script.R*, each line should not be considered individually, but rather as a set for each Make. For example, where compatibility was explained as “all vehicles are compatible with the exception of certain models”, this was coded as per the statement - if one were to read the first line alone (all vehicles are compatible), one would misunderstand that manufacturer’s cars. The percentage of remaining unknown rows (N.B., not vehicles) from the DfT/DVLA data is 0% (if the script has run successfully this number should be zero).

The E10 compatibility data is then matched to the vehicle licensing data from the DfT/DVLA, and then summary tables of distribution of E10 compatibility are produced.

The tables below set out the degree of E10 compatibility in the GB petrol-using car parc at five points in time (June 2014, June 2015, June 2016, June 2017 and an estimate of June 2020). The June 2020 figures are estimated using the specific rates of decline in the GB parc from 2014 to 2017 on a make-and-year basis. In other words, the estimate applies a different rate of decline for a Land Rover and for a Vauxhall, and a different rate for a 1 year old Land Rover over the next three years than for a 5 year old Land Rover over the same period. In the below:

1. *NoE10_14* is the number of E10 incompatible petrol cars in 2014
2. *E10_17* is the number of E10 compatible petrol cars in 2017
3. *NoE10_17* is the number of E10 incompatible petrol cars in 2017
4. *NoE10_20* is the estimated number (hence the decimals) of E10 incompatible petrol cars in 2020

If you apply these rates of decline of each Make-Year combination in the parc to those cars that are E10 compatible, the resultant 2020 estimate is the number of *2017-and-earlier* E10 compatible cars still on the road. As a result, neither an estimate for E10 compatible cars in 2020 nor the related parc percentages are given.

Other British is not a make itself, but an amalgam of niche and rare manufacturers. Therefore, where it appears in the tables below, it has been moved to the bottom (regardless of table ranking).

Analysis of E10 compatibility using DfT/DVLA

Table 1: E10 incompatibility of cars, by LA

LaName	NoE10_14	E10_17	NoE10_17	No_E10_2020
Unknown Local Authority	35846	324021	17915	13763.96
Cornwall	19778	152531	12384	8785.91
Wiltshire	15829	154452	10952	8254.10
Birmingham	18610	289888	10194	6550.27
Shropshire	9261	90223	6590	5113.01
Cheshire East	9346	125301	6240	4914.39
Leeds	9905	197636	5854	4219.03
Bromley	8535	101805	5592	4041.13
Bristol, City of	10305	138822	6119	4037.60
New Forest	7314	65157	5147	3975.69
Wealden	6501	58362	4851	3833.36
Central Bedfordshire	7124	95980	4963	3824.85
East Riding of Yorkshire	7749	99547	4954	3783.86
South Gloucestershire	7999	96583	5142	3750.56
Herefordshire, County of	6720	55496	4785	3681.60
South Somerset	7033	53745	4845	3613.35
County Durham	7481	126941	4531	3437.73
Cheshire West and Chester	6960	107247	4449	3402.02
Sheffield	8509	126333	4748	3298.48
Dudley	8017	95850	4723	3217.50
Croydon	8122	97515	4802	3211.69
North Somerset	6756	69679	4386	3178.15
Horsham	5279	51883	4009	3167.29
Aylesbury Vale	5689	62601	4028	3163.34
Stratford-on-Avon	5024	45449	3808	3099.49
Barnet	6885	96858	4375	3066.06
Kirklees	6479	109070	4123	3062.78
Isle of Wight	6734	47441	4477	3061.58
Chichester	4993	40958	3780	3052.70
Wycombe	5629	60152	3895	2988.11
Bradford	7108	111386	4128	2987.07
South Oxfordshire	4996	48450	3637	2869.55
Waverley	4855	44880	3558	2822.07
Medway	6734	82743	4057	2761.95
West Berkshire	4896	57746	3473	2738.37
Braintree	4735	49247	3406	2708.09
Enfield	6106	79020	3836	2687.29
South Norfolk	4681	43798	3394	2673.67
East Devon	5426	45576	3698	2658.31
Wychavon	4760	46665	3400	2648.94

LaName	NoE10_14	E10_17	NoE10_17	No_E10_2020
Maidstone	4965	52670	3393	2648.55
Guildford	4811	48284	3386	2633.44
Arun	5796	55486	3753	2629.47
East Hampshire	4375	42730	3268	2592.49
Elmbridge	4485	50804	3305	2585.84
Richmond upon Thames	4972	50300	3413	2567.58
South Cambridgeshire	4709	52247	3259	2533.38
Chelmsford	4535	59546	3198	2526.99
Teignbridge	5514	41611	3640	2522.86
Mid Sussex	4837	52072	3333	2510.57
Poole	5512	52770	3476	2505.45
Solihull	5522	95226	3436	2501.04
King's Lynn and West Norfolk	4654	43125	3225	2493.04
Stockport	5951	92653	3523	2466.49
Wandsworth	4969	50671	3314	2462.56
Suffolk Coastal	4502	43388	3152	2442.74
Hillingdon	6031	89881	3537	2441.16
Northumberland	4834	86719	3140	2439.69
Coventry	6845	80757	3715	2438.16
Mid Suffolk	4103	32105	3067	2436.02
Windsor and Maidenhead	4597	52054	3158	2435.67
Huntingdonshire	4861	57975	3222	2430.60
East Lindsey	4756	40076	3162	2420.66
Milton Keynes	5488	128302	3378	2415.92
Basingstoke and Deane	4729	57176	3163	2412.37
Westminster	3703	30925	2805	2405.43
Reigate and Banstead	4603	53874	3205	2403.41
Bournemouth	5894	56788	3604	2400.03
Bath and North East Somerset	4994	54863	3266	2399.52
Wokingham	4548	59401	3109	2396.92
Brighton and Hove	5675	61273	3494	2390.19
Stroud	4729	38397	3173	2369.93
Ealing	5608	73200	3448	2350.55
Cherwell	4443	49951	3041	2324.86
City of Edinburgh	5456	114013	3193	2322.89
Sevenoaks	4125	42279	2924	2312.89
Vale of White Horse	4191	42175	3016	2295.12
Fife	5174	106818	3065	2289.03
Harrogate	3718	48934	2732	2282.59
Winchester	3933	38069	2856	2262.99
Wakefield	5173	87487	3126	2256.25
Havering	4554	76609	3017	2250.82
Kensington and Chelsea	3229	25033	2580	2247.73
Aberdeenshire	3862	71427	2699	2232.01
Wirral	5853	93684	3212	2226.83
Breckland	4251	40401	2948	2213.67
Mole Valley	3732	35907	2803	2205.85
Mendip	4288	35978	2970	2195.68
Southend-on-Sea	4661	55007	3041	2194.91
Colchester	4449	55912	2928	2193.99
Tendring	4514	46928	2970	2188.12
Plymouth	6034	65916	3437	2186.03

LaName	NoE10_14	E10_17	NoE10_17	No_E10_2020
North Norfolk	3998	32726	2879	2185.38
Test Valley	3909	41891	2766	2171.02
East Hertfordshire	3912	50842	2741	2164.19
Bedford	4274	68237	2902	2161.38
Dacorum	4215	51629	2819	2145.93
Sedgemoor	4395	37081	2911	2115.54
Torbay	5534	40810	3287	2110.42
Ashford	3933	38706	2753	2099.46
Sutton	5041	61351	3115	2095.65
Charnwood	4251	51124	2785	2086.65
Bexley	4914	72156	2966	2076.13
West Oxfordshire	3848	35322	2719	2074.84
Tunbridge Wells	3786	37292	2659	2063.89
Rother	3807	32498	2708	2062.56
Doncaster	4897	73080	2894	2056.61
Cotswold	3432	29462	2523	2044.44
West Dorset	4196	33136	2788	2038.34
Broadland	4021	44289	2724	2035.27
Canterbury	4152	42512	2808	2017.75
Walsall	5263	70252	3023	2014.08
Carmarthenshire	4446	49274	2721	2000.31
Tonbridge and Malling	3879	43463	2602	1989.75
Hounslow	4865	61681	2925	1984.79
South Kesteven	3725	41750	2580	1981.70
St Edmundsbury	3400	33360	2474	1977.92
Powys	3995	35414	2630	1976.48
Warwick	3879	44189	2595	1970.62
Swindon	5081	83845	2922	1968.15
Malvern Hills	3425	26226	2516	1964.19
North Hertfordshire	3607	45179	2526	1960.00
South Northamptonshire	3110	30592	2373	1951.00
Chiltern	3339	35974	2454	1933.47
Wigan	5539	90815	2927	1924.82
Tandridge	3331	32055	2469	1922.31
East Dorset	3659	34704	2540	1918.78
Cardiff	5248	86096	2890	1908.52
Redbridge	4333	66579	2722	1903.65
Southampton	5170	61210	2944	1898.10
Highland	3660	56729	2386	1884.37
Epping Forest	3289	45687	2354	1875.21
Sefton	4553	75421	2674	1869.86
Swale	3996	44009	2587	1851.21
Uttlesford	2890	30280	2219	1840.83
Taunton Deane	3864	34668	2574	1833.48
Northampton	4671	63763	2708	1826.19
Swansea	4931	73475	2624	1822.55
Babergh	3153	31079	2296	1820.43
Harrow	4612	67171	2717	1812.93
Basildon	3848	58471	2504	1812.21
Lambeth	4207	42804	2646	1811.23
Hart	3170	35727	2306	1805.52
Rotherham	4607	66810	2592	1796.25

LaName	NoE10_14	E10_17	NoE10_17	No_E10_2020
Brent	4598	59166	2714	1782.21
Derby	4688	66747	2645	1776.29
Leicester	5621	103908	2940	1776.08
Forest of Dean	3428	25405	2375	1773.15
Havant	3784	39557	2439	1766.18
Bromsgrove	3562	32763	2352	1761.91
St Albans	3482	50275	2327	1737.59
Kingston upon Thames	3775	44078	2459	1733.11
Merton	4071	47496	2526	1730.02
South Hams	3345	27277	2347	1716.88
Manchester	5291	91568	2732	1712.94
Thanet	3994	39419	2486	1709.16
Wolverhampton	4773	62976	2602	1707.92
Sandwell	5310	73544	2736	1701.26
North Lincolnshire	3655	45815	2265	1667.11
Eastleigh	3527	45120	2270	1665.93
Pembrokeshire	3306	33162	2230	1664.81
Lewisham	4366	53606	2585	1662.48
Trafford	3987	69613	2343	1662.04
Fareham	3396	41087	2208	1660.99
Wyre Forest	3526	33033	2303	1644.25
Waveney	3486	36440	2300	1634.84
Peterborough	4079	74046	2383	1634.30
Barnsley	3961	60323	2349	1629.72
Worthing	3723	35605	2337	1580.21
Lichfield	3031	34106	2047	1579.76
Camden	2834	28367	2027	1574.00
Lewes	3230	32320	2121	1572.96
Flintshire	3598	48008	2167	1572.60
Stoke-on-Trent	4356	65408	2301	1568.40
Woking	3296	35561	2148	1562.90
North Dorset	2978	22016	2056	1562.30
Warrington	3556	64762	2137	1561.34
South Holland	3334	27327	2133	1549.62
Telford and Wrekin	3845	47325	2188	1549.55
Bolton	4132	73853	2259	1539.58
Newark and Sherwood	3026	33820	1992	1537.02
Tewkesbury	2968	29653	2051	1535.76
North Devon	3356	27353	2144	1534.91
Greenwich	3732	52281	2269	1528.87
Maldon	2488	22894	1849	1526.68
North Kesteven	2995	34423	2023	1524.84
Stafford	3027	39790	1978	1522.32
Amber Valley	3336	38057	2033	1520.08
Southwark	3503	38638	2188	1518.55
Portsmouth	4042	59401	2331	1516.73
Hinckley and Bosworth	3135	35670	2077	1499.44
Dover	3244	32962	2062	1490.23
Waltham Forest	3593	51261	2229	1485.29
Fenland	3051	28036	1998	1483.62
Shepway	3317	31600	2070	1481.88
Runnymede	2850	29218	1977	1472.35

LaName	NoE10_14	E10_17	NoE10_17	No_E10_2020
Surrey Heath	2899	34222	1946	1470.45
York	3236	51690	2000	1463.96
South Staffordshire	2914	36388	1912	1455.76
Daventry	2547	26611	1835	1455.05
Cheltenham	3248	35006	2068	1450.12
Bracknell Forest	3099	56842	1988	1449.89
Rochford	2634	31646	1835	1447.05
Mid Devon	3032	23383	2006	1439.20
Calderdale	3256	53253	1941	1437.16
Haringey	3542	40302	2125	1435.82
Rugby	2957	33275	1941	1433.17
Harborough	2611	29483	1821	1432.46
Thurrock	2973	50593	1924	1416.42
Spelthorne	3089	36437	1951	1409.04
Liverpool	4024	89366	2193	1401.52
Hambleton	2216	26279	1665	1400.92
Nottingham	4237	57785	2175	1397.33
South Bucks	2358	26341	1751	1393.85
Tameside	3927	61717	2129	1386.07
Gwynedd	2987	26889	1825	1376.26
Staffordshire Moorlands	2569	29925	1736	1367.72
West Lindsey	2550	27435	1763	1365.33
Hammersmith and Fulham	2478	26003	1766	1363.36
Welwyn Hatfield	2686	37109	1834	1359.40
South Lakeland	2493	30050	1709	1357.42
East Northamptonshire	2518	29391	1771	1357.24
Derbyshire Dales	2187	21113	1622	1356.06
Rushcliffe	2504	34918	1702	1347.57
East Cambridgeshire	2636	26506	1790	1335.28
North East Derbyshire	2523	30811	1727	1329.75
North West Leicestershire	2536	30863	1747	1327.74
South Lanarkshire	2889	85839	1691	1314.25
East Staffordshire	2616	31534	1747	1305.20
Glasgow City	4025	120186	1999	1303.03
Three Rivers	2554	33220	1693	1302.75
Monmouthshire	2558	27871	1741	1295.76
Wyre	2908	34139	1809	1276.86
Castle Point	2525	32011	1693	1274.37
Conwy	3070	33426	1786	1257.44
Dumfries and Galloway	2714	37735	1667	1255.84
Nuneaton and Bedworth	3212	38893	1796	1234.31
Perth and Kinross	2195	39533	1526	1232.43
Ipswich	3251	37745	1871	1227.09
Newcastle-under-Lyme	2676	36454	1631	1217.82
Bassetlaw	2480	31790	1584	1214.16
Wrexham	2902	37962	1698	1207.60
Sunderland	3147	65584	1668	1199.20
West Lancashire	2376	33292	1554	1187.90
Norwich	3173	32756	1837	1183.72
Reading	3026	42551	1797	1182.78
Bury	3103	61996	1710	1182.34
Rhondda Cynon Taf	3483	63899	1827	1180.74

LaName	NoE10_14	E10_17	NoE10_17	No_E10_2020
Erewash	2858	35767	1655	1174.35
Vale of Glamorgan	2767	39253	1653	1174.27
Blaby	2564	32570	1602	1172.68
Gloucester	3403	42850	1852	1170.10
Lancaster	2905	34980	1660	1167.10
South Derbyshire	2313	30619	1498	1159.55
Stockton-on-Tees	3009	52555	1603	1157.77
Chorley	2574	33060	1579	1156.87
Hertsmere	2458	37418	1568	1155.78
South Ribble	2736	33982	1615	1145.26
Exeter	3069	34178	1804	1144.11
Torridge	2482	19513	1576	1141.41
Luton	2943	51563	1691	1141.12
Oldham	3037	55033	1686	1137.69
Caerphilly	2945	48600	1650	1129.50
Kingston upon Hull, City of	3613	57585	1770	1126.08
Kettering	2466	31994	1541	1113.26
Denbighshire	2449	25914	1528	1113.02
Islington	2187	23476	1521	1106.74
Rochdale	2995	53106	1606	1101.80
Oxford	2786	29166	1665	1098.52
Brentwood	1838	30045	1349	1098.04
Eastbourne	2748	31259	1628	1089.92
Gedling	2505	35519	1492	1078.51
West Devon	2107	16174	1438	1074.56
Gravesham	2423	31087	1523	1072.77
Hackney	2501	27189	1560	1070.40
Ceredigion	2199	16485	1454	1069.23
Scarborough	2348	29049	1428	1064.07
Newcastle upon Tyne	2542	53673	1481	1058.48
North East Lincolnshire	2902	42764	1587	1055.15
Dartford	2408	33932	1454	1053.97
Ashfield	2664	34969	1513	1050.50
Aberdeen City	2217	59486	1327	1049.83
Newport	2808	41163	1591	1049.14
Broxtowe	2468	33099	1444	1023.36
North Tyneside	2494	53282	1458	1021.60
Blackpool	3177	36582	1616	1019.11
High Peak	2206	26971	1370	1015.66
Redditch	2524	26155	1468	1013.74
Worcester	2497	34168	1492	1013.70
Fylde	2196	26078	1376	1010.12
Salford	3003	57142	1592	1004.72
Hastings	2479	25855	1511	992.17
Allerdale	2017	26048	1295	986.50
Rushmoor	2418	59669	1439	983.28
Scottish Borders	2039	30750	1246	981.31
Angus	1746	31974	1208	980.55
Epsom and Ewell	2108	27502	1360	980.38
Great Yarmouth	2481	27572	1436	975.99
Cannock Chase	2455	30087	1371	964.67
Wellingborough	2041	24126	1339	963.87

LaName	NoE10_14	E10_17	NoE10_17	No_E10_2020
North Lanarkshire	2597	85424	1327	960.51
Selby	1749	24902	1190	960.43
Forest Heath	2371	23246	1375	960.13
Preston	2577	32451	1403	959.37
Crawley	2469	33582	1469	957.50
Gateshead	2211	45144	1280	945.36
Chesterfield	2222	31990	1308	934.49
Slough	2769	62631	1469	931.90
North Warwickshire	1840	21010	1253	929.89
St. Helens	2638	52100	1413	926.44
Broxbourne	2088	33427	1273	916.09
Purbeck	1833	16000	1225	903.19
Melton	1525	15901	1098	900.21
Redcar and Cleveland	2284	37288	1252	895.51
Bridgend	2306	42205	1252	889.49
Newham	2595	42753	1453	887.97
Cambridge	2153	25578	1287	883.71
Mansfield	2260	30712	1303	878.44
Boston	1948	18005	1190	874.12
Weymouth and Portland	2129	19174	1274	868.52
Tower Hamlets	1885	27242	1251	865.75
Adur	2059	20533	1264	864.74
Eden	1461	13362	1016	844.26
Gosport	2139	24751	1267	840.07
Christchurch	1847	18675	1206	838.14
Ribble Valley	1367	17811	1029	827.09
West Lothian	1929	51816	1067	810.13
Watford	1889	37993	1186	802.83
Barking and Dagenham	2286	40267	1222	796.00
Neath Port Talbot	2120	39415	1145	791.33
Ryedale	1447	15541	960	789.56
Carlisle	1802	27604	1062	784.26
Darlington	1691	27388	1024	766.84
Isle of Anglesey	1724	17841	1030	764.04
Moray	1377	24644	938	761.06
Bolsover	1699	21727	1048	756.53
Falkirk	1877	47855	1027	735.71
Blackburn with Darwen	2092	32123	1088	726.01
Tamworth	1863	23141	1060	711.15
Torfaen	1977	27180	1079	710.11
Craven	1260	16383	859	689.28
Lincoln	1819	22552	1022	687.61
West Somerset	1532	10603	989	682.31
East Lothian	1429	29807	877	672.62
Argyll and Bute	1411	22797	844	644.83
Rutland	1122	11612	772	643.42
South Ayrshire	1573	32791	851	643.23
Renfrewshire	1578	59140	858	629.83
Stevenage	1618	27873	947	628.94
Pendle	1420	20728	848	620.48
South Tyneside	1569	35028	865	610.42
Stirling	1249	26848	778	609.69

LaName	NoE10_14	E10_17	NoE10_17	No_E10_2020
Harlow	1705	27260	904	604.05
Richmondshire	1043	12724	718	584.31
Halton	1748	35418	890	575.01
East Dunbartonshire	1141	34433	719	568.03
Midlothian	1243	26166	724	567.97
Middlesbrough	1566	31647	806	555.01
Rosendale	1192	19128	734	549.20
East Ayrshire	1372	31870	737	542.37
North Ayrshire	1632	37181	768	536.62
Oadby and Wigston	1327	18036	767	529.66
Copeland	1238	19008	713	512.79
Burnley	1217	20784	679	485.18
Corby	1354	19150	719	466.73
Hyndburn	1316	20168	677	465.67
Barrow-in-Furness	1173	17974	661	460.07
Dundee City	1417	35816	648	453.41
East Renfrewshire	884	28883	549	429.83
Hartlepool	1066	22018	596	423.96
Knowsley	1233	33801	656	419.29
Blaenau Gwent	1154	17578	567	373.36
Clackmannanshire	791	15660	417	310.73
West Dunbartonshire	816	23352	406	283.77
Inverclyde	810	21760	395	271.39
Orkney Islands	517	5766	318	256.93
Merthyr Tydfil	687	13977	359	234.86
Na h-Eileanan Siar	412	7403	252	192.57
Shetland Islands	284	5953	206	176.44
City of London	181	1292	132	117.58
Isles of Scilly	78	311	49	33.57

Table 2: Number of cars that are E10 incompatible, by Make (est. 5000+ in 2020)

MakeDesc	NoE10_14	E10_17	NoE10_17	No_E10_2020
MG	108670	18449	76994	66566.80
ROVER	200556	0	93324	48033.16
VOLKSWAGEN	73252	1247159	62479	45590.34
FORD	41557	2894052	38735	39224.74
MAZDA	73865	384299	46600	31029.92
NISSAN	123891	915167	55958	27404.24
AUSTIN	28870	17	27530	26973.84
TRIUMPH	25325	0	25358	25160.31
MORRIS	25701	0	24720	24101.18
TOYOTA	67703	1165831	37188	22588.01
JAGUAR	16914	124018	16898	16979.08
PORSCHE	16414	99950	15392	14972.92
MERCEDES	18718	484954	16466	14444.00
PEUGEOT	79736	903079	27652	12400.56
ALFA ROMEO	29707	40412	15496	11071.43
FIAT	55462	605381	21644	10227.57
BENTLEY	9569	13812	8939	8365.61

MakeDesc	NoE10_14	E10_17	NoE10_17	No_E10_2020
LOTUS	8796	4304	8208	7708.00
CITROEN	26396	542189	10971	7575.88
ROLLS ROYCE	8033	2172	7394	6874.40
TVR	7382	0	6758	6157.05
AUDI	13651	543845	9932	6073.33
MORGAN	5829	0	6255	6005.92
DAEWOO	47097	1177	18435	5591.26
OTHER BRITISH	70271	0	59112	51425.12

Table 3: Number of cars that are E10 incompatible, by Make and Model (est. 2000+ in 2020)

GenModel	E10_17	NoE10_17	No_E10_2020
VOLKSWAGEN GOLF	402669	43003	28564.00
MG MGB	1	20962	21052.62
MAZDA MX-5	74050	27348	18355.52
NISSAN MICRA	318584	34043	16041.86
MORRIS MINOR	0	13500	13086.05
ROVER 25	0	25593	10068.89
AUSTIN MODEL MISSING	6	9408	9582.11
MG MGF	4	10631	9442.23
FORD ESCORT	9358	8869	9050.49
MG TF	2963	12011	7686.48
ROVER MINI	0	11704	7657.79
MG MIDGET	2	7441	7597.49
FORD MODEL MISSING	11125	6644	7154.07
AUSTIN MINI	2	7635	6883.72
PORSCHE 911	35726	6858	6664.40
ROLLS ROYCE MODEL MISSING	110	6609	6148.36
ROVER 75	0	13588	5606.56
VOLKSWAGEN BEETLE	55005	5817	5565.33
MORRIS MODEL MISSING	0	5576	5543.82
MG MODEL MISSING	165	5060	5176.66
JAGUAR E TYPE	18	4905	5046.40
ROVER 45	0	12460	4903.63
MG ZR	2483	7621	4851.19
MERCEDES 200	1874	4966	4822.21
TRIUMPH STAG	0	4877	4774.24
BENTLEY MODEL MISSING	639	4714	4599.24
VOLKSWAGEN MODEL MISSING	3325	4666	4557.91
ROVER 200 SERIES	0	7564	4554.51
SKODA FABIA	164351	11494	4095.89
MAZDA 323	3635	5978	3939.28
FORD CORTINA	6	3623	3872.43
NISSAN MODEL MISSING	7343	6967	3793.12
TOYOTA COROLLA	112692	6131	3789.43
TRIUMPH SPITFIRE	0	3591	3650.21
FERRARI MODEL MISSING	255	3592	3619.41
AUSTIN HEALEY MODEL MISSING	5	3354	3598.22
JAGUAR MODEL MISSING	1827	3482	3589.26
FORD CAPRI	3	3500	3569.98

GenModel	E10_17	NoE10_17	No_E10_2020
MAZDA MODEL MISSING	1970	5200	3468.61
PEUGEOT 106	16456	7852	3350.08
TRIUMPH TR6	0	3340	3216.51
TOYOTA MR2	10097	4745	3166.23
MERCEDES 300	2417	3269	3136.20
LOTUS ELISE	2077	3441	3049.13
JAGUAR XJ SERIES	20127	3311	3039.22
MORRIS MINI	0	2995	2866.36
PORSCHE MODEL MISSING	1940	2483	2701.90
DAEWOO MATIZ	333	9574	2699.04
CITROEN 2CV	3	2817	2698.94
FIAT PUNTO	186662	8113	2655.29
TOYOTA RAV4	64335	4647	2630.24
PEUGEOT 205	6	3420	2570.86
PEUGEOT 306	6516	6496	2561.08
FORD FIESTA	1278273	2738	2546.05
PORSCHE 944	4	2762	2518.31
SEAT AROSA	80	6977	2466.59
RILEY MODEL MISSING	0	2471	2451.08
MG ZS	864	3837	2438.40
LOTUS ELAN	1	2550	2417.65
TVR CHIMERA	0	2650	2401.50
AUDI A3	143396	4291	2401.50
ROVER 400 SERIES	0	4062	2363.97
TRIUMPH HERALD	0	2375	2352.43
TOYOTA STARLET	4590	4111	2338.03
ALFA ROMEO SPIDER	1297	2775	2329.59
TOYOTA CELICA	19211	3728	2323.44
FORD ANGLIA	2	2247	2296.48
TRIUMPH MODEL MISSING	0	2294	2291.81
TOYOTA CARINA	101	3697	2234.43
MINI COOPER	5759	4546	2231.48
FORD SIERRA	675	2521	2209.83
ALFA ROMEO 147	2417	3774	2184.37
VOLKSWAGEN POLO	563643	3308	2166.62
MG ZT	702	3368	2142.24
AUSTIN SEVEN	8	2089	2123.70
NISSAN ALMERA	64897	4806	2106.16
PERODUA MYVI	0	2774	2101.61
MORGAN 4/4	0	2188	2098.06
ROVER MODEL MISSING	0	2427	2047.04
NISSAN PRIMERA	16367	4538	2041.72
OTHER BRITISH MODEL MISSING	0	59112	51425.12

Table 4: Number of cars that are E10 incompatible, by Make and Model and year of manufacture (est. 2000+ in 2020)

GenModel	YearManufacture	NoE10_14	E10_17	NoE10_17	No_E10_2020
VOLKSWAGEN GOLF	2006	12145	16439	11324	8010.66
VOLKSWAGEN GOLF	2004	14820	11179	12099	6564.41
VOLKSWAGEN GOLF	2005	12153	13558	10638	6507.98

GenModel	YearManufacture	NoE10_14	E10_17	NoE10_17	No_E10_2020
NISSAN MICRA	1999	25484	0	12791	5118.54
NISSAN MICRA	1998	17682	0	7730	3105.79
MG MGB	1972	3051	0	2914	2901.05
MG TF	2003	6216	0	4550	2805.24
MG TF	2004	5382	0	4177	2724.81
MAZDA MX-5	1999	5005	0	3926	2636.53
MAZDA MX-5	1998	4768	0	3646	2521.69
MAZDA MX-5	2000	4838	0	3899	2396.43
MG ZR	2004	8232	0	3458	2255.78
MG MGB	1973	2142	0	2265	2169.10
ROVER 25	2003	13465	0	5498	2120.03
MG TF	2002	4505	0	3169	2038.78
ROVER 25	2002	13970	0	5203	2003.60
OTHER BRITISH MODEL MISSING	2001	8487	0	5037	3596.44
OTHER BRITISH MODEL MISSING	2002	5888	0	3839	2571.64
OTHER BRITISH MODEL MISSING	2000	5104	0	2957	2054.81

Table 5: Number of cars that are E10 incompatible, by year of manufacture

YearManufacture	NoE10_14	E10_17	NoE10_17	No_E10_2020
2017	NA	739384	671	608.50
2016	NA	1306032	1559	1443.80
2015	NA	1263819	1476	1366.25
2014	476	1129564	758	591.89
2013	941	1052801	794	705.18
2012	1303	925396	1161	1021.56
2011	1577	870207	1448	1250.55
2010	1924	984663	1680	1329.09
2009	2273	1040050	1990	1436.01
2008	2801	1040929	2350	1452.78
2007	4435	1204678	3624	2046.38
2006	18680	1141001	15935	10299.49
2005	26497	1097863	19938	10813.06
2004	106788	1025119	66966	32323.75
2003	98650	941283	51670	23727.88
2002	90168	782523	42791	20825.79
2001	91951	559557	43461	21931.56
2000	72276	356983	33148	17907.53
1999	133169	201641	55236	26211.74
1998	96453	122058	40774	22201.98
1997	85594	69209	38872	22850.60
1996	58222	40058	27137	18585.25
1995	41330	26872	20386	14305.67
1994	31543	16673	16714	11449.91
1993	23065	13020	13283	9373.02
1992	17515	10793	11492	8117.57
1991	27524	6149	19660	14153.29
1990	23520	6270	16936	13647.01
1989	20864	3388	15598	13243.94
1988	13528	2327	10363	8873.69

YearManufacture	NoE10_14	E10_17	NoE10_17	No_E10_2020
1987	10310	1483	8162	7440.45
1986	8468	1036	6879	6176.99
1985	7331	679	6307	6005.06
1984	5825	478	5063	4710.90
1983	6024	416	5347	5185.66
1982	4546	273	4083	4054.34
1981	4640	203	4355	4265.53
1980	5480	194	5283	5810.89
1979	6031	198	5780	7010.75
1978	5805	141	5604	7201.10
1977	4800	84	4675	5157.35
1976	4200	110	4605	4443.08
1975	4378	187	5204	5106.26
1974	6259	189	7789	7643.31
1973	11690	354	12726	12460.53
1972	16566	374	15724	15787.13
1971	12245	223	11809	11722.23
1970	11501	144	11201	11341.68
1969	10601	142	10453	10529.66
1968	11338	175	11221	11050.97
1967	10519	134	10410	10411.41
1966	9263	156	9407	9404.64
1965	8454	142	8586	8647.58
1964	8247	234	8112	8050.26
1963	7548	254	7434	7859.77
1962	6184	231	6082	6395.92
1961	6202	138	6131	6315.18
1960	6968	150	6853	7228.09
1959	7005	133	7400	7867.80
1958	5550	81	5805	6104.77
1957	4516	66	4678	4823.80
1956	4240	95	4436	4567.77
1955	5386	55	5610	5881.07
1954	4792	62	4974	5214.25
1953	4169	25	4292	4437.54
1952	2943	14	3003	3132.84
1951	2515	19	2603	2743.79
1950	2146	25	2225	2318.29
1949	2074	19	2157	2258.15
1948	1944	29	2001	2231.75
1947	1692	36	1764	1881.30
1946	1171	29	1207	1211.86
1945	87	1	98	108.36
1944	84	0	105	115.26
1943	99	0	114	122.79
1942	119	0	123	129.93
1941	99	1	127	136.15
1940	301	8	314	330.42
1939	1896	66	1932	1964.37
1938	2848	83	2870	2888.15
1937	3916	74	3975	4046.11
1936	3881	65	3925	3973.58

YearManufacture	NoE10_14	E10_17	NoE10_17	No_E10_2020
1935	3907	53	3946	4014.96
1934	4210	41	4237	4340.36
1933	3128	30	3187	3296.52
1932	2395	11	2426	2477.75
1931	1750	8	1790	1836.80
1930	1958	12	2030	2095.43
1929	1862	11	1952	1958.93
1928	1566	6	1594	1612.73
1927	1185	12	1206	1170.73
1926	1055	20	1084	1126.61
1925	782	28	777	756.03
1924	635	32	632	633.56
1923	467	17	466	496.89
1922	255	9	253	256.24
1921	535	14	527	536.08
1920	99	8	102	113.57
1919	43	0	49	51.46
1918	32	0	31	30.85
1917	43	0	44	44.16
1916	46	0	47	51.55
1915	107	0	118	130.03
1914	138	5	137	118.99
1913	122	3	130	135.45
1912	100	2	100	99.17
1911	74	0	82	90.31
1910	54	0	50	51.40
1909	42	0	44	42.74
1908	32	0	32	31.61
1907	28	0	32	34.15
1906	36	0	32	34.57
1905	31	1	29	30.11
1904	126	1	133	133.00
1903	115	2	110	110.00
1902	56	0	64	64.00
1901	37	0	38	38.00
1900	28	0	27	27.00

There are small numbers of vehicles which are listed as E10 compatible going back as far as the very early days of motoring. “E10 compatible” vehicles from before 1940 are almost exclusively Vauxhalls, with a small number of BMWs. Unlike most manufacturers in this dataset, the classification of these manufacturers does not include a date before which all vehicles should be taken as E10 incompatible. Although there may be some “noise” produced by errors in the data, the vast bulk of the very old E10 compatible vehicles can be attributed to imprecise consumer information.

Table 6: Number of cars that are E10 compatible (’14-’17 and estimated 2020)

datayear	E10	No_E10
2014	17769887	1405042.0
2015	17703610	1187654.0
2016	17822538	1022403.0

datayear	E10	No_E10
2017	17990144	886432.0
2020	NA	648073.3