

TECH TIP

08MY-10MY 176 Updated Speedometer Conversion Rate Procedure

SUBJECT VEHICLES:

2008-2010 model year conventional trucks

Note: This technical tip is provided as technical information and is not authorization for a warrantable repair.

OVERVIEW:

The tech tip below is to use with the updated cable and DX2 for changing the speedometer conversion rate. Please note that an updated cable can be provided through Tech Assist if it's returned once the repair has been completed.

REPAIR PROCEDURE:

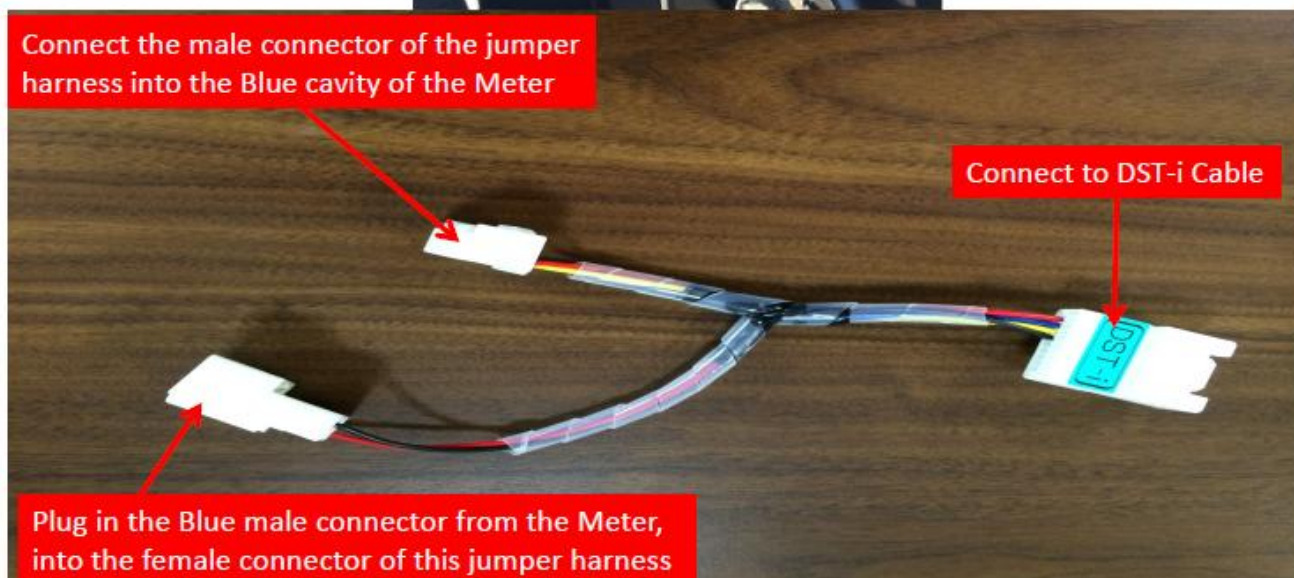
1. Obtain the correct cables and DST-I Interface (Bowie is no longer applicable) as shown in the picture below.

Note: The Nexiq will not work for this procedure.



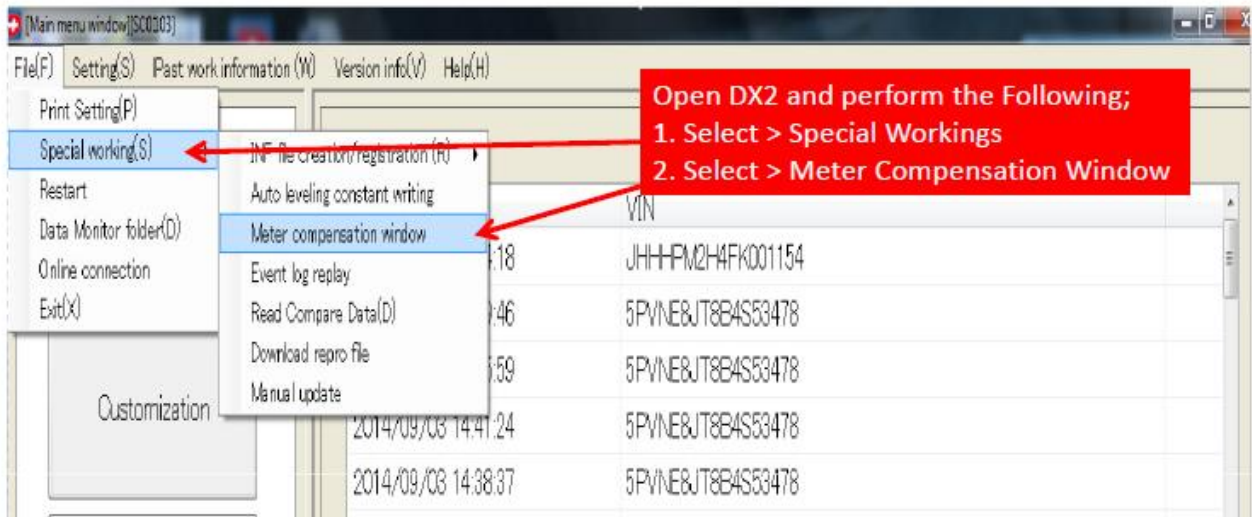
TECH TIP

- Using the Conversion Rate List at the end of this procedure, find the chart depending on transmission, (automatic or manual) the tire metric radius and the rear axle ratio. This will give you the new conversion rate that will be used later in this procedure.
- Remove the blue connector from the back of the meter; connect each of the three (3) connectors as shown in the picture below.

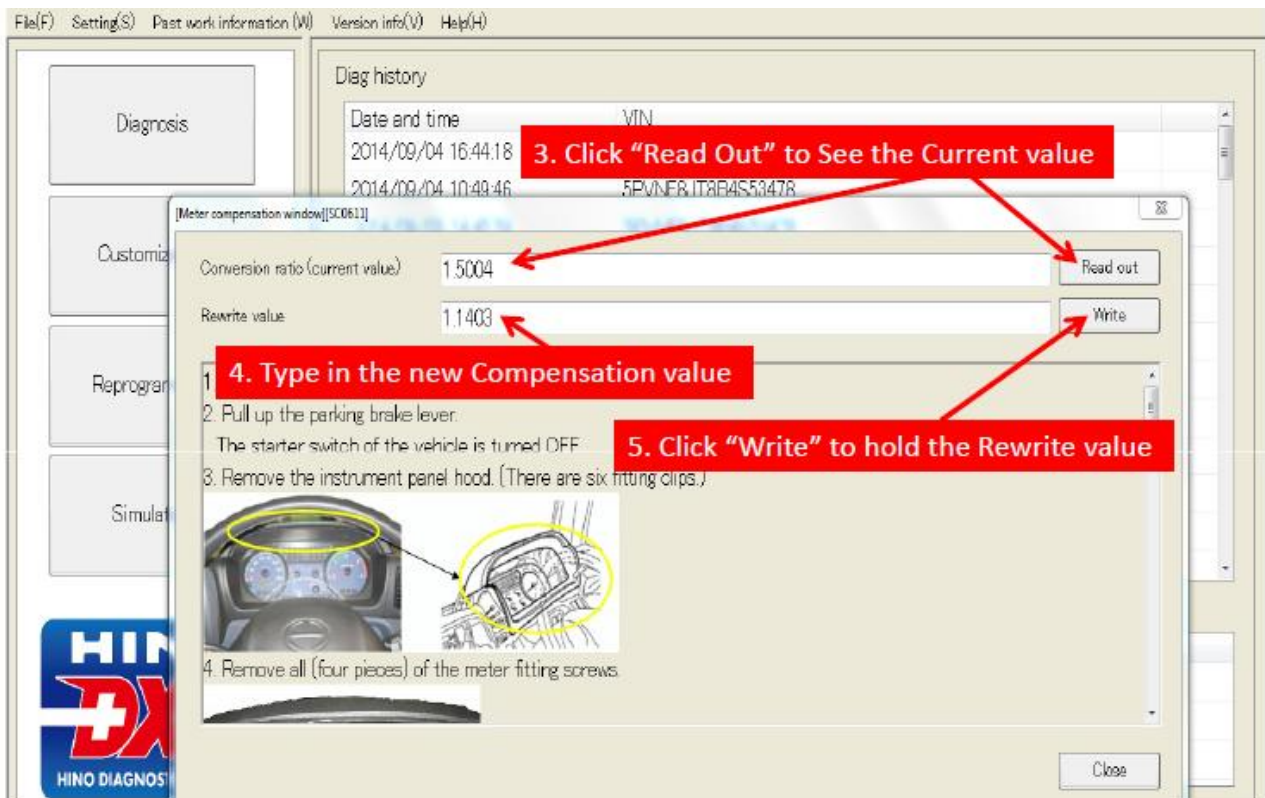


TECH TIP

- Connect your laptop and open DX2. Select the file tab, “Special Workings” and then “Meter Compensation Window”.

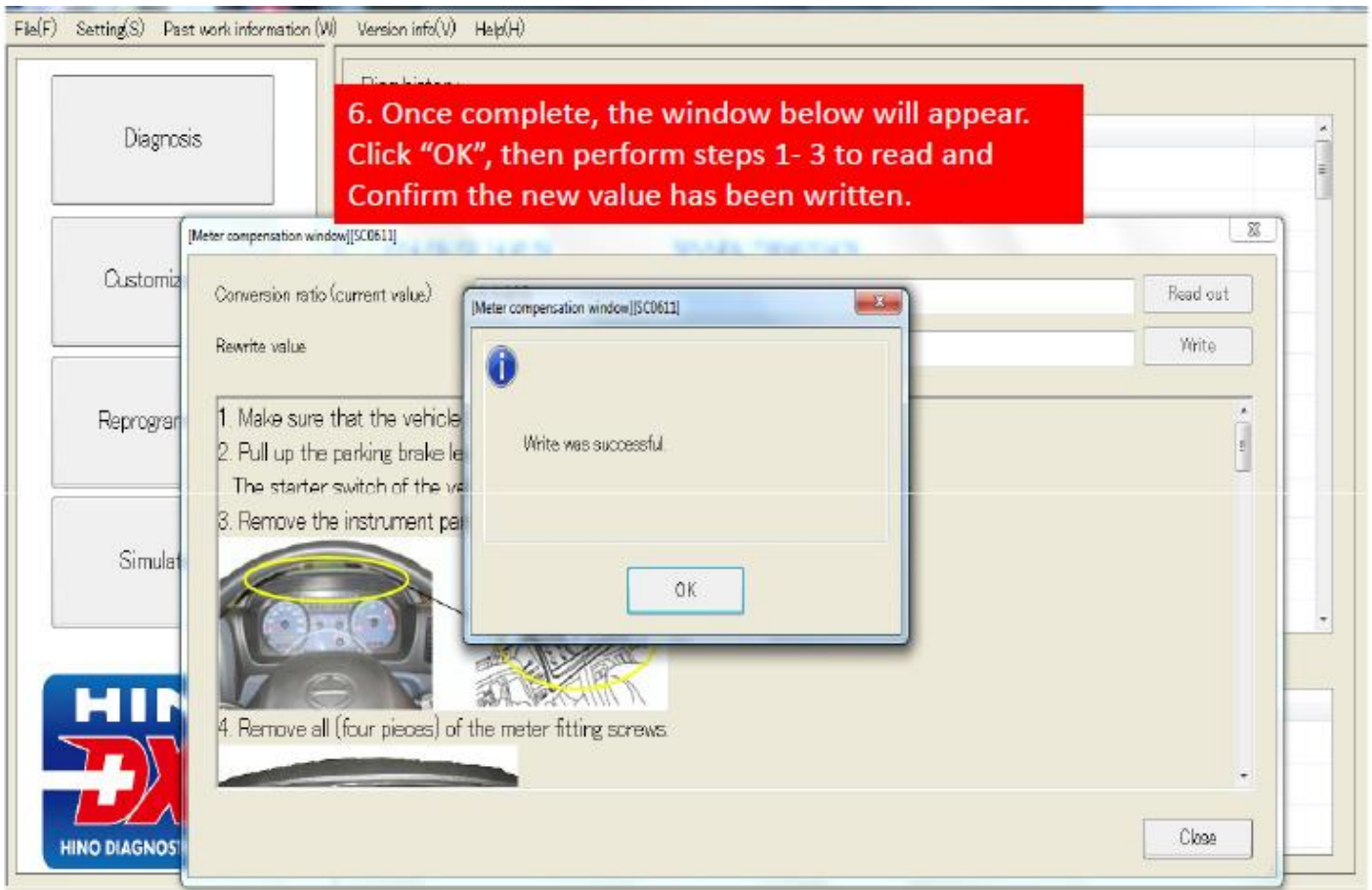


- Click “Read Out” to see the current value and type in the new compensation value. Click “Write” to hold the rewrite value as shown in the picture below.



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6. Once Complete, the window in the picture below will appear. Click "OK", and then perform the above steps to read and confirm the new value has been written.



Procedure Complete



A Toyota Group Company

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TECH TIP

SPEEDOMETER CONVERSION RATE LIST

EATON FS-4205A, FS-5406A, FS6406A MANUAL TRANSMISSION SERIES AND FO-5406B, FO-6406B ULTRASHIFT TRANSMISSION SERIES

TIRE SIZE	RADIUS	REAR AXLE GEAR RATIO											
		2.93	3.07	3.15	3.21	3.31	3.42	3.58	3.73	3.90	3.91	4.10	4.11
215/85R16	0.374	0.798	0.761	0.742	0.728	0.706	0.683	0.653	0.627	0.599	0.598	0.570	0.569
225/70R19.5	0.395	0.843	0.804	0.784	0.769	0.746	0.722	0.690	0.662	0.633	0.631	0.602	0.601
245/70R19.5	0.407	0.868	0.829	0.808	0.792	0.768	0.744	0.710	0.682	0.652	0.650	0.620	0.619
255/70R22.5	0.453	0.966	0.922	0.899	0.882	0.855	0.828	0.791	0.759	0.726	0.724	0.690	0.689
9R22.5	0.470	1.003	0.957	0.933	0.915	0.887	0.859	0.821	0.788	0.753	0.751	0.716	0.715
255/80R22.5	0.475	1.013	0.967	0.943	0.925	0.897	0.868	0.829	0.796	0.761	0.759	0.724	0.722
275/80R22.5	0.491	1.047	1.000	0.974	0.956	0.927	0.897	0.857	0.823	0.787	0.785	0.748	0.747
10R22.5	0.492	1.050	1.002	0.976	0.958	0.929	0.899	0.859	0.824	0.788	0.786	0.750	0.748
295/75R22.5	0.493	1.052	1.004	0.978	0.960	0.931	0.901	0.861	0.826	0.790	0.788	0.751	0.750
11R22.5	0.508	1.084	1.034	1.008	0.989	0.959	0.928	0.887	0.851	0.814	0.812	0.774	0.772

TIRE SIZE	RADIUS	REAR AXLE GEAR RATIO											
		4.30	4.33	4.56	4.63	4.78	4.88	4.89	5.13	5.29	5.38	5.57	5.63
215/85R16	0.374	0.543	0.540	0.512	0.505	0.489	0.479	0.478	0.455	0.442	0.434	0.419	0.415
225/70R19.5	0.395	0.574	0.570	0.541	0.533	0.516	0.506	0.505	0.481	0.466	0.459	0.443	0.438
245/70R19.5	0.407	0.591	0.587	0.558	0.549	0.532	0.521	0.520	0.496	0.481	0.473	0.456	0.452
255/70R22.5	0.453	0.658	0.654	0.621	0.611	0.592	0.580	0.579	0.552	0.535	0.526	0.508	0.503
9R22.5	0.470	0.683	0.678	0.644	0.634	0.614	0.602	0.601	0.572	0.555	0.546	0.527	0.522
255/80R22.5	0.475	0.690	0.686	0.651	0.641	0.621	0.608	0.607	0.579	0.561	0.552	0.533	0.527
275/80R22.5	0.491	0.714	0.709	0.673	0.663	0.642	0.629	0.627	0.598	0.580	0.570	0.551	0.545
10R22.5	0.492	0.715	0.710	0.674	0.664	0.643	0.630	0.629	0.599	0.581	0.571	0.552	0.546
295/75R22.5	0.493	0.716	0.712	0.676	0.665	0.644	0.631	0.630	0.600	0.582	0.573	0.553	0.547
11R22.5	0.508	0.738	0.733	0.696	0.686	0.664	0.651	0.649	0.619	0.600	0.590	0.570	0.564

TIRE SIZE	RADIUS	REAR AXLE GEAR RATIO			
		5.86	6.14	6.43	6.83
215/85R16	0.374	0.399	0.380	0.363	0.342
225/70R19.5	0.395	0.421	0.402	0.384	0.361
245/70R19.5	0.407	0.434	0.414	0.395	0.372
255/70R22.5	0.453	0.483	0.461	0.440	0.414
9R22.5	0.470	0.501	0.478	0.457	0.430
255/80R22.5	0.475	0.506	0.483	0.461	0.434
275/80R22.5	0.491	0.523	0.500	0.477	0.449
10R22.5	0.492	0.525	0.501	0.478	0.450
295/75R22.5	0.493	0.526	0.502	0.479	0.451
11R22.5	0.508	0.542	0.517	0.494	0.465

TECH TIP

ALLISON 1000HS, 1000RDS AUTOMATIC TRANSMISSION SERIES

TIRE SIZE	RADIUS	REAR AXLE GEAR RATIO									
		4.11	4.78	4.88	5.13	5.29	5.38	5.57	5.63	5.86	6.14
215/85R16	0.374	1.179	1.014	0.993	0.944	0.916	0.901	0.870	0.861	0.827	0.789
225/70R19.5	0.395	1.245	1.071	1.049	0.997	0.967	0.951	0.919	0.909	0.873	0.833
245/70R19.5	0.407	1.283	1.103	1.080	1.028	0.997	0.980	0.947	0.936	0.900	0.859
9R22.5	0.470	1.482	1.274	1.248	1.187	1.151	1.132	1.093	1.082	1.039	0.992
255/80R22.5	0.475	1.497	1.287	1.261	1.200	1.163	1.144	1.105	1.093	1.050	1.002
255/70R22.5	0.453	1.428	1.228	1.203	1.144	1.109	1.091	1.054	1.042	1.001	0.956
10R22.5	0.492	1.551	1.334	1.306	1.243	1.205	1.185	1.144	1.132	1.088	1.038
295/75R22.5	0.493	1.554	1.336	1.309	1.245	1.207	1.187	1.147	1.134	1.090	1.040
11R22.5	0.508	1.602	1.377	1.349	1.283	1.244	1.223	1.182	1.169	1.123	1.072

ALLISON 2200HS, 2200RDS, 2500RDS, 3000RDS AUTOMATIC TRANSMISSION SERIES

TIRE SIZE	RADIUS	REAR AXLE GEAR RATIO									
		4.11	4.88	5.13	5.29	5.38	5.57	5.63	5.86	6.14	
245/70R19.5	0.407	1.238	1.043	0.992	0.962	0.946	0.913	0.904	0.868	0.829	
9R22.5	0.470	1.430	1.204	1.145	1.111	1.092	1.055	1.044	1.003	0.957	
255/80R22.5	0.475	1.445	1.217	1.158	1.123	1.104	1.066	1.055	1.013	0.967	
10R22.5	0.492	1.497	1.260	1.199	1.163	1.143	1.104	1.093	1.050	1.002	
295/75R22.5	0.493	1.500	1.263	1.201	1.165	1.146	1.107	1.095	1.052	1.004	
11R22.5	0.508	1.545	1.302	1.238	1.201	1.181	1.140	1.128	1.084	1.034	
225/70R19.5	0.395	1.202	1.012	0.963	0.933	0.918	0.886	0.877	0.843	0.804	
215/85R16	0.374	1.138	0.958	0.911	0.884	0.869	0.839	0.830	0.798	0.761	
255/70R22.5	0.453	1.378	1.161	1.104	1.071	1.053	1.017	1.006	0.966	0.922	

AISIN 450-43L

TIRE SIZE	RADIUS	REAR AXLE GEAR RATIO									
		4.11	4.78	4.88	5.13	5.29	5.38	5.57	5.63	5.86	6.14
215/85R16	0.374	1.283	1.103	1.080	1.028	0.996	0.980	0.946	0.936	0.900	0.858
225/70R19.5	0.395	1.355	1.165	1.141	1.085	1.052	1.035	1.000	0.989	0.950	0.907
245/70R19.5	0.407	1.396	1.200	1.176	1.118	1.084	1.066	1.030	1.019	0.979	0.934
9R22.5	0.470	1.612	1.386	1.358	1.291	1.252	1.231	1.189	1.177	1.131	1.079
255/80R22.5	0.475	1.629	1.401	1.372	1.305	1.266	1.245	1.202	1.189	1.143	1.090
255/70R22.5	0.453	1.554	1.336	1.309	1.245	1.207	1.187	1.146	1.134	1.090	1.040
10R22.5	0.492	1.688	1.451	1.421	1.352	1.311	1.289	1.245	1.232	1.183	1.129
295/75R22.5	0.493	1.691	1.454	1.424	1.355	1.314	1.292	1.248	1.234	1.186	1.132
11R22.5	0.508	1.742	1.498	1.467	1.396	1.354	1.331	1.286	1.272	1.222	1.166