

Biodiesel Emissions Database

Version 1

Assembled by the U.S. Environmental Protection Agency

December 7, 2001

The data in this file has been collected from publicly available sources and has been used by the EPA to evaluate the impact that biodiesel has on emissions of regulated pollutants. Additional information about the project can be found at:

<http://www.epa.gov/otaq/models/biodsl.htm>

For questions about this database, contact David Korotney at:

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FBATCH_ID	FBATCH_BASE	STUDY_ID	CETANE_NUM	CETANE_IDX	CETANE_IMP
2000-01-1967-B100	2000-01-1967-2D	2000-01-1967	47.5		0
2000-01-1967-2D	BASE	2000-01-1967	43.3	45.2	0
2000-01-1967-B20	2000-01-1967-2D	2000-01-1967	46		0
2000-01-1969-RME	2000-01-1969-BASE	2000-01-1969	56		
2000-01-1969-BASE	BASE	2000-01-1969	52		
MCCORMICK_97-2D	BASE	MCCORMICK_97	47.3	47.3	0
MCCORMICK_97-SOY1	MCCORMICK_97-2D	MCCORMICK_97	47.6		0
MCCORMICK_97-SOY2	MCCORMICK_97-2D	MCCORMICK_97	48		0
972904-A	BASE	972904	44.8		0
972904-B	972904-A	972904	50.5		0
962233-2D	BASE	962233	46.7		0
962233-BD	962233-2D	962233	51.6		0
961114-RME	961114-D2	961114	61.8		0
961114-100REE	961114-D2	961114	59.7		0
961114-50REE	961114-D2	961114	54.2		0
961114-20REE	961114-D2	961114	50.7		0
961114-D2	BASE	961114	49.2		0
HOWES_81-LS	BASE	HOWES_81			
HOWES_81-B20	HOWES_81-LS	HOWES_81			
STOTLER_95-LSRD	BASE	STOTLER_95	47.1	44.8	0
STOTLER_95-B20	STOTLER_95-LSRD	STOTLER_95	50.1	46.4	0
952388-ARB1	BASE	952388	43.1		
952388-ARB2	BASE	952388	43.1		
952388-EPA	BASE	952388	44		
952388-SME	952388-ARB2	952388	45.7		
952388-20SME	952388-ARB2	952388	50.4		
952388-30SME	952388-ARB2	952388			
952388-40SME	952388-ARB2	952388			
952388-CME6ARB1	952388-ARB1	952388			
952388-CME20ARB1	952388-ARB1	952388			
952388-CME40ARB1	952388-ARB1	952388			
952388-CME6EPA	952388-EPA	952388			
952388-CME10EPA	952388-EPA	952388			
952388-CME20EPA	952388-EPA	952388			
FOSSEEN_71N-2D	BASE	FOSSEEN_71N	46.3		
FOSSEEN_71N-MS	FOSSEEN_71N-2D	FOSSEEN_71N	51.4		
FOSSEEN_71N-BLEND	FOSSEEN_71N-2D	FOSSEEN_71N			
PETERSON_94-BASE	BASE	PETERSON_94			
PETERSON_94-REE	PETERSON_94-BASE	PETERSON_94			
PETERSON_94-REE20	PETERSON_94-BASE	PETERSON_94			
PETERSON_94-REE50	PETERSON_94-BASE	PETERSON_94			
NIPER_93LS	BASE	NIPER_93			
NIPER_93TME	NIPER_93LS	NIPER_93			
NIPER_93GME	NIPER_93LS	NIPER_93			
NIPER_93GME20	NIPER_93LS	NIPER_93			
NIPER_93T20	NIPER_93LS	NIPER_93			
NIPER_93T20MS10	NIPER_93LS	NIPER_93			
932734REF	BASE	932734	43		0
932734MS	932734REF	932734	42		0
SHARP_96-2D	BASE	SHARP_96	43.3		0
SHARP_96-REE	SHARP_96-2D	SHARP_96	60.7		0
SHARP_96-RME	SHARP_96-2D	SHARP_96	58.7		0
SHARP_96-REE50	SHARP_96-2D	SHARP_96	50.8		0
SHARP_96-RME50	SHARP_96-2D	SHARP_96	51		0
SHARP_96-REE20	SHARP_96-2D	SHARP_96	48.2		0
SHARP_96-RME20	SHARP_96-2D	SHARP_96	48.2		0
MARSHALL-DF	BASE	MARSHALL	44		0
MARSHALL-B20	MARSHALL-DF	MARSHALL			0
MARSHALL-B30	MARSHALL-DF	MARSHALL			0
1999-01-1117DA	BASE	1999-01-1117	48.8		
1999-01-1117BD20	1999-01-1117DA	1999-01-1117	49.4		
1999-01-1117BD50	1999-01-1117DA	1999-01-1117	50.3		
1999-01-1117BD100	1999-01-1117DA	1999-01-1117	51.8		

FBATCH_ID	FBATCH_BASE	STUDY_ID	CETANE_NUM	CETANE_IDX	CETANE_IMP
971689ULD	BASE	971689	49.6	51	
971689RME	971689ULD	971689	56.5	57	
HOWES_88-2D	BASE	HOWES_88			
HOWES_88-20SME	HOWES_88-2D	HOWES_88			
950400D2	BASE	950400	43.2		
950400SME	950400D2	950400	54.7		
950400BLEND	950400D2	950400	49.1		
961166-REF	BASE	961166	46.2		0
961166-BD	961166-REF	961166	56.4		0
961166-20BD	961166-REF	961166	50.3		0
961166-35BD	961166-REF	961166	52.2		0
961166-65BD	961166-REF	961166	54.5		0
MANICOM-REF	BASE	MANICOM_93	45.4	45.4	0
MANICOM-SOY	MANICOM-REF	MANICOM_93	45.8		0
MANICOM-B10	MANICOM-REF	MANICOM_93			0
MANICOM-B20	MANICOM-REF	MANICOM_93			0
MANICOM-B30	MANICOM-REF	MANICOM_93			0
MANICOM-B40	MANICOM-REF	MANICOM_93			0
GOETZ_SOYATED2	BASE	GOETZ_SOYATE			
GOETZ_SOYATESOY	GOETZ_SOYATED2	GOETZ_SOYATE			
GOETZ_TALLOWD2	BASE	GOETZ_TALLOW			
GOETZ_TALLOWB20	GOETZ_TALLOWD2	GOETZ_TALLOW			
932686-SF2	BASE	932686	49	51.2	0
932686-30RME	932686-SF2	932686	48	50.1	0
932686-RME	932686-SF2	932686	48	61.2	0
830377-REF	BASE	830377	48.9	46.5	0
830377-SOY	830377-REF	830377	39.3		0
SIRMAN_98-LS	BASE	SIRMAN_98	67		0
SIRMAN_98-B20	SIRMAN_98-LS	SIRMAN_98	65		0
SHARP_94-92TA2D	BASE	SHARP_94-92TA	46	47.7	
SHARP_94-92TAB20	SHARP_94-92TA2D	SHARP_94-92TA	51		
SHARP_94-92TABIO	SHARP_94-92TA2D	SHARP_94-92TA	60		
SHARP_94-60-A	BASE	SHARP_94-60	44.9		0
SHARP_94-60-D	SHARP_94-60-A	SHARP_94-60	47.3		0
SHARP_94-60-R1	BASE	SHARP_94-60	45.8		0
SHARP_94-60-C	SHARP_94-60-R1	SHARP_94-60	48.1		0
PETERSON_99-2D	BASE	PETERSON_99	46.5		0
PETERSON_99-20REE	PETERSON_99-2D	PETERSON_99	51		0
PETERSON_99-50REE	PETERSON_99-2D	PETERSON_99	54.2		0
PETERSON_99-100REE	PETERSON_99-2D	PETERSON_99	56.9		0
FOSSEEN_92TA2D	BASE	FOSSEEN_92TA	47.2	47.2	0
FOSSEEN_92TA20/80	FOSSEEN_92TA2D	FOSSEEN_92TA	48.4	48.4	0
FOSSEEN_92TA30/70	FOSSEEN_92TA2D	FOSSEEN_92TA	49.2	49.2	0
CALLAHAN_93-2D	BASE	CALLAHAN_93	49.4		0
CALLAHAN_93-10	CALLAHAN_93-2D	CALLAHAN_93	49.4	48.9	0
CALLAHAN_93-20	CALLAHAN_93-2D	CALLAHAN_93	50	48.4	0
CALLAHAN_93-30	CALLAHAN_93-2D	CALLAHAN_93	48.4	49	0
CALLAHAN_93-50	CALLAHAN_93-2D	CALLAHAN_93	48.8	49.3	0
CALLAHAN_93-100	CALLAHAN_93-2D	CALLAHAN_93	43.3		0
CALLAHAN_93-PHIL	BASE	CALLAHAN_93	42.6		0
CALLAHAN_93-PHIL10	CALLAHAN_93-PHIL	CALLAHAN_93			0
CALLAHAN_93-PHIL20	CALLAHAN_93-PHIL	CALLAHAN_93			0
CALLAHAN_93-PHIL30	CALLAHAN_93-PHIL	CALLAHAN_93			0
GRABOSKI_00-CERT1	BASE	GRABOSKI_00	46		0
GRABOSKI_00-CERT2	BASE	GRABOSKI_00	46		0
GRABOSKI_00-CERT3	BASE	GRABOSKI_00	46		0
GRABOSKI_00-CERT4	BASE	GRABOSKI_00	46		0
GRABOSKI_00-LFFA	GRABOSKI_00-CERT2	GRABOSKI_00	52.2		0
GRABOSKI_00-HFFA1	GRABOSKI_00-CERT3	GRABOSKI_00	53.2		0

FBATCH_ID	FBATCH_BASE	STUDY_ID	CETANE_NUM	CETANE_IDX	CETANE_IMP
GRABOSKI_00-HFFA2	GRABOSKI_00-CERT4	GRABOSKI_00	53.2		0
GRABOSKI_00-SOY	GRABOSKI_00-CERT2	GRABOSKI_00	59		0
GRABOSKI_00-TALLOW	GRABOSKI_00-CERT2	GRABOSKI_00	64.8		0
GRABOSKI_00-ITALLOW	GRABOSKI_00-CERT2	GRABOSKI_00	54.3		0
GRABOSKI_00-LARD	GRABOSKI_00-CERT2	GRABOSKI_00	63.6		0
GRABOSKI_00-CANOLA	GRABOSKI_00-CERT2	GRABOSKI_00	53.9		0
GRABOSKI_00-20M80	GRABOSKI_00-CERT1	GRABOSKI_00			0
GRABOSKI_00-20L80	GRABOSKI_00-CERT1	GRABOSKI_00			0
GRABOSKI_00-20IT80	GRABOSKI_00-CERT1	GRABOSKI_00			0
SMITH_98-SME	SMITH_98-D2	SMITH_98	45.1		
SMITH_98-D2	BASE	SMITH_98	43.3		
SMITH_98-20SME	SMITH_98-D2	SMITH_98			
MCCORMICK_01-CERT1	BASE	MCCORMICK_01	47.4	48.3	0
MCCORMICK_01-CERT2	BASE	MCCORMICK_01	47.4	48.3	0
MCCORMICK_01-10ARO	BASE	MCCORMICK_01	48.2	49.4	0
MCCORMICK_01-FT	BASE	MCCORMICK_01	74.8	78.3	0
MCCORMICK_01-NO1	BASE	MCCORMICK_01	42.8	45.8	0
MCCORMICK_01-SOYGC	MCCORMICK_01-CERT1	MCCORMICK_01	47.4		0
MCCORMICK_01-BIO	MCCORMICK_01-CERT1	MCCORMICK_01	55.6		0
MCCORMICK_01-1SG	MCCORMICK_01-FT	MCCORMICK_01			0
MCCORMICK_01-20SG	MCCORMICK_01-FT	MCCORMICK_01	74.8	70.5	0
MCCORMICK_01-80SG	MCCORMICK_01-FT	MCCORMICK_01	53.3	52.2	0
MCCORMICK_01-SOYCE	MCCORMICK_01-CERT1	MCCORMICK_01	47.7	49.5	0
MCCORMICK_01-SOYCE	MCCORMICK_01-CERT2	MCCORMICK_01	47.7	49.5	0
MCCORMICK_01-SOY10/	MCCORMICK_01-10ARO	MCCORMICK_01	48	50.1	0
MCCORMICK_01-BIOCEF	MCCORMICK_01-CERT1	MCCORMICK_01	45.5	50.2	0
MCCORMICK_01-BIO10A	MCCORMICK_01-10ARO	MCCORMICK_01	47.7	50.7	0
MCCORMICK_01-K50	MCCORMICK_01-NO1	MCCORMICK_01	44.3	51.2	0
DURBIN_99-RFD	BASE	DURBIN_99		49	0
DURBIN_99-BIODIESEL	DURBIN_99-RFD	DURBIN_99	53		
DURBIN_99-BLEND	DURBIN_99-RFD	DURBIN_99			

CETANE_TYP	CETANE_DIF	CETANE_NAT	SULFUR	NITROGEN	TAROM	MAROM	PAROM	IBP	T10
Z	0	47.5	0					628	631
Z	0	43.3	476		37.1			378	439
Z	0	46	370					385	453
	0	56	1				0		
	0	52	310				3		
Z	0	47.3	290	200	29.7				415
Z	0	47.6			27				
Z	0	48			24.4				
Z	0	44.8	350	85.7	29.8			375	435
Z	0	50.5	260	61.1	23.9			381	451
Z	0	46.7	400					369	432
Z	0	51.6	330					441	637
Z	0	61.8	120	10					
Z	0	59.7	120	11					
Z	0	54.2	240						
Z	0	50.7	330						
Z	0	49.2	360						
Z	0	47.1	410		29.6			371	414
Z	0	50.1	310		28.07			361	425
Z	0	43.1							
Z	0	43.1							
Z	0	44							
Z	0	45.7							
Z	0	50.4							
Z	0	46.3	430		34.4			375	441
Z	0	51.4							
Z									
Z									
Z									
Z									
Z	0								
Z	0								
Z	0								
Z	0								
Z	0								
Z	0								
Z	0								
Z	0								
Z	0	43	37		31			352	425
Z	0	42							
Z	0	43.3	30					343	433
Z	0	60.7	1					643	681
Z	0	58.7	1					462	569
Z	0	50.8	13					370	477
Z	0	51	12					373	475
Z	0	48.2	22					341	443
Z	0	48.2	21					347	442
Z	0	44	434		33			343	439
Z	0								
Z	0								
Z	0	48.8	400		29.3				
Z	0	49.4	300		23.44				
Z	0	50.3	200		14.65				
Z	0	51.8	0		0				

CETANE_TYP	CETANE_DIF	CETANE_NAT	SULFUR	NITROGEN	TAROM	MAROM	PAROM	IBP	T10
Z	0	49.6	500		20.75	17.1	4.1		
Z	0	56.5	500		0	0	0		
Z	0	43.2	400		28.81				
Z	0	54.7	0		0				
Z	0	49.1	300		19.65				
Z	0	46.2	31	110	34.3			387	429
Z	0	56.4							
Z	0	50.3							
Z	0	52.2							
Z	0	54.5							
Z	0	45.4	900					329	360
Z	0	45.8	10					608	628
Z									
Z									
Z									
Z									
Z									
Z	0								
Z	0								
Z	0	49	6		24.7	13.4	1.6	351	406
Z	0	48	4		14.3	9.6	1.3	369	415
Z	0	48	1		0	0	0	630	666
Z	0	48.9	230	80	31			378	432
Z	0	39.3							
Z	0	67	10	7.6	2.43			466	475
Z	0	65	10	7.4	1.88			466	480
Z	0	46	330		32.8			368	430
Z	0	51							
Z	0	60							
Z	0	44.9	320		34.9			355	421
Z	0	47.3	24					378	428
Z	0	45.8	32		35.7			367	429
Z	0	48.1	24					373	433
Z	0	46.5	360						
Z	0	51	290	41					
Z	0	54.2	160	25					
Z	0	56.9	5	2					
Z	0	47.2	35		25.7			378	433
Z	0	48.4			43.7			387	444
Z	0	49.2			45.2			378	453
Z	0	49.4	137						
Z	0	49.4	122					373	450
Z	0	50	100					376	450
Z	0	48.4	85					376	466
Z	0	48.8	62					396	486
Z	0	43.3	3						
Z	0	42.6	86		34.5			381	440
Z									
Z									
Z	0	46	300		29.2			353.9	
Z	0	46	300		29.2			353.9	
Z	0	46	300		29.2			353.9	
Z	0	46	300		29.2			353.9	
Z	0	52.2	0	4				624	633
Z	0	53.2	0	48				594	623

CETANE_TYP	CETANE_DIF	CETANE_NAT	SULFUR	NITROGEN	TAROM	MAROM	PAROM	IBP	T10
Z	0	53.2	0	48				594	623
Z	0	59	0	3				613	643
Z	0	64.8	0	77				616	634
Z	0	54.3	0	5				611	631
Z	0	63.6	0	3				580	612
Z	0	53.9	0	0				600	615
Z									
Z									
Z									
		45.1	0						
		43.3	476		39.1			378	438
Z	0	47.4	430		31.9			352	423
Z	0	47.4	430		31.9			352	423
Z	0	48.2	57		7.5			355	421
Z	0	74.8						454	500
Z	0	42.8	138					338	365
Z	0	47.4	0						
Z	0	55.6	15						
Z	0								
Z	0	74.8	14					418	500
Z	0	53.3	24					446	570
Z	0	47.7	263					365	437
Z	0	47.7	263					365	437
Z	0	48	27					388	431
Z	0	45.5	268					375	446
Z									
Z	0	47.7	35					396	432
Z	0	44.3	62					347	381
Z			330		8.4				
			40						
			280						

T50	T90	T95
637	646	
511	610	
545	639	
493	603	
504	596	
538	631	
507	597	
646	658	
498	602	628
531	627	643
513	597	623
499	589	
501	591	
705	747	
696	725	
615	694	
613	698	
525	676	
525	662	
513	601	

T50	T90	T95
	613	
	649	
527	632	
423	496	518
638	650	662
455	523	543
491	637	646
664	671	682
498	568	592
484	502	511
498	624	642
507	598	
502	597	
536	627	
507	598	
533	627	
511	595	619
541	626	639
561	633	644
550	638	
564	646	
580	650	
612	656	
489	564	
498.7	583.7	
498.7	583.7	
498.7	583.7	
498.7	583.7	
640	655	
632	647	

T50	T90	T95
632	647	
654	669	
646	665	
639	658	
624	638	
636	645	
511	609	
514	599	
514	599	
478	599	
556	618	
407	471	
576	628	
625	638	
542	631	
542	631	
511	640	
548	632	

511 641
522 644
479 550

510 641

EP	SPEC_GRAV	VISCOSITY	HCRATIO	OXYGEN	BIO_SOURCE	BIO_TYPE	BIO_CAT	PER_BIO	HEAT
648	0.886	4.12	0.153	11	SOYBEAN OIL	ESTER	PLANT	100	15992
666	0.856	2.8	0.151					0	18916
667	0.862	2.92	0.148	2.1	SOYBEAN OIL	ESTER	PLANT	20	17798
	0.881	4.53			RAPSEED OIL	ESTER	PLANT	100	16035
	0.832	2.4						0	18443
	0.843		0.154	0.11				0	
		3.6		1	SOY	ESTER	PLANT	8.9	
	0.848	3.6		2	SOY	ESTER	PLANT	17.7	
653	0.8458	2.56						0	
657	0.8548	2.89			SOY METHYL	ESTER	PLANT	20	
640	0.8466	2.7						0	18228
658	0.8867	4.7			SOY	ESTER	PLANT	100	17067
	0.8802	5.65	0.161	9.22	RAPSEED	ESTER	PLANT	100	16237
	0.876	6.17	0.154	11.36	RAPSEED	ESTER	PLANT	100	16259
	0.862	4.06	0.164	4.42	RAPSEED	ESTER	PLANT	50	17230
	0.8535	3.2	0.15	2.51	RAPSEED	ESTER	PLANT	20	18030
	0.8495	2.96	0.15	0.33				0	18443
								0	
					SOY	ESTER	PLANT	20	
638	0.852	2.56						0	
649	0.859	2.81						20	
	0.8529	2.73						0	19555
	0.8529	2.73						0	19555
	0.854	2.87						0	19604
	0.8871	4.33			SOY	ESTER	PLANT	100	17115
	0.8483	2.65			SOY	ESTER	PLANT	20	19272
					SOY	ESTER	PLANT	30	
					SOY	ESTER	PLANT	40	
					CANOLA	ESTER	PLANT	6	
					CANOLA	ESTER	PLANT	20	
					CANOLA	ESTER	PLANT	40	
					CANOLA	ESTER	PLANT	6	
					CANOLA	ESTER	PLANT	10	
					CANOLA	ESTER	PLANT	20	
646	0.854	3.2						0	18400
	0.8855	3.97			SOY		PLANT	100	16000
					SOY		PLANT	20	
								0	
					RAPSEED OIL	ESTER	PLANT	100	
					RAPSEED OIL	ESTER	PLANT	20	
					RAPSEED OIL	ESTER	PLANT	50	
								0	
					TALLOW	ESTER	ANIMAL	100	
					GREASE	ESTER	ANIMAL	100	
					GREASE	ESTER	ANIMAL	20	
					TALLOW	ESTER	ANIMAL	20	
					TALLOW AND SOY	ESTER	ANIMAL	30	
633	0.846	2.8						0	
				0.59	METHYL SOYATE	ESTER	PLANT	5	
633	0.8448	2.63	0.1507	0				0	18351
763	0.8751	6.07	0.1611	9.2	RAPSEED	ESTER	PLANT	100	16336
761	0.8794	5.51	0.1596	9.9	RAPSEED	ESTER	PLANT	100	16229
714	0.8597	4.05	0.1539	5.5	RAPSEED	ESTER	PLANT	50	17365
709	0.8617	3.8	0.1559	5.1	RAPSEED	ESTER	PLANT	50	17288
687	0.8504	3.13	0.1557	2	RAPSEED	ESTER	PLANT	20	17930
696	0.8514	3.02	0.1556	2.7	RAPSEED	ESTER	PLANT	20	17936
651	0.85	2.6						0	
						ESTER	PLANT	20	
						ESTER	PLANT	30	
	0.852			0				0	
	0.858			2.2	SOY		PLANT	20	
	0.868			5.5	SOY		PLANT	50	
	0.884			11	SOY		PLANT	100	

EP	SPEC_GRAV	VISCOSITY	HCRATIO	OXYGEN	BIO_SOURCE	BIO_TYPE	BIO_CAT	PER_BIO	HEAT
	0.828							0	18406
	0.882				RAPESEED	ESTER	PLANT	100	16766
								0	
					SOY	ESTER	PLANT	20	
	0.8591	3	0.1563	0				0	18486
					SOY METHYL				
	0.8855	3.9	0.1491	11	ESTER	ESTER	PLANT	100	15949
	0.8676	3.3	0.1519	3.4	SOY	ESTER	PLANT	30	17411
677	0.8468		0.148	0.21				0	
			0.15	11.03	SOY	ESTER	PLANT	100	
				2.37	SOY	ESTER	PLANT	20	
				4	SOY	ESTER	PLANT	35	
				7.24	SOY	ESTER	PLANT	65	
547	0.8151	1.484						0	
664	0.8844	4.06		11	SOY	ESTER	PLANT	100	17650
					SOY	ESTER	PLANT	10	
					SOY	ESTER	PLANT	20	
					SOY	ESTER	PLANT	30	
					SOY	ESTER	PLANT	40	
								0	
					SOY	ESTER	PLANT	20	
								0	
					TALLOW	OIL	ANIMAL	20	
570	0.819	1.85		0				0	
	0.836	2.47		3.2	RAPESEED	ESTER	PLANT	30	
768		4.48		10.7	RAPESEED	ESTER	PLANT	100	
621	0.847	2.38	0.147	0.06				0	
	0.924	30.6	0.148	9.9	SOYBEAN OIL	OIL	PLANT	100	
545	0.811	2.41	0.168	0				0	
657	0.826	2.64	0.167	2.3	SOYBEAN	ESTER	PLANT	20	
639	0.8463	2.6						0	
								20	
								100	
633	0.8473	2.59		0.5				0	
647	0.855	2.82		2.7	SOY	ESTER	PLANT	20	
638	0.8463	2.59		0				0	
647	0.854	2.83		2.2	SOY	ESTER	PLANT	20	
			0.1527					0	
			0.1537	2.43	RAPESEED	ESTER	PLANT	20	
			0.1554	4.06	RAPESEED	ESTER	PLANT	50	
			0.1531	5.25	RAPESEED	ESTER	PLANT	100	
640	0.8493	2.695						0	18430
649	0.856	2.887			SOY	ESTER	PLANT	20	18236
653	0.8597	2.996			SOY	ESTER	PLANT	30	18112
	0.8545	3.09						0	
678	0.8576	3.2			METHYL SOYATE	ESTER	PLANT	10	
678	0.8612	3.26			METHYL SOYATE	ESTER	PLANT	20	
680	0.8644	3.38			METHYL SOYATE	ESTER	PLANT	30	
674	0.8708	3.6			METHYL SOYATE	ESTER	PLANT	50	
	0.8871	4.11			METHYL SOYATE	ESTER	PLANT	100	
612	0.8448	2.46						0	
					METHYL SOYATE	ESTER	PLANT	10	
					METHYL SOYATE	ESTER	PLANT	20	
					METHYL SOYATE	ESTER	PLANT	30	
646.4	0.8434	2.5	0.155	0				0	18456
646.4	0.8434	2.5	0.155	0				0	18456
646.4	0.8434	2.5	0.155	0				0	18456
646.4	0.8434	2.5	0.155	0				0	18456
665	0.8789	5.62	0.164	11.1	LOW FATTY ACID GREASE	ESTER	ANIMAL	100	17215
667	0.8767	4.66	0.164	11.28	HIGH FATTY ACID GREASE	ESTER	ANIMAL	100	17154

EP	SPEC_GRAV	VISCOSITY	HCRATIO	OXYGEN	BIO_SOURCE	BIO_TYPE	BIO_CAT	PER_BIO	HEAT
667	0.8767	4.66	0.164	11.28	HIGH FATTY ACID				
					GREASE	ESTER	ANIMAL	100	17154
673	0.8877	4.55	0.154	11.16	SOY	ESTER	PLANT	100	17153
682	0.8708	4.91	0.162	11.74	TALLOW	ESTER	ANIMAL	100	17144
675	0.8767	4.93	0.167	11.08	TALLOW	ESTER	ANIMAL	100	17061
670	0.8762	4.85	0.162	11.82	LARD	ESTER	ANIMAL	100	17165
671	0.8811	4.63	0.158	11.04	CANOLA OIL	ESTER	PLANT	100	17241
					SOY	ESTER	PLANT	20	
					LOW FATTY ACID				
					GREASE	ESTER	ANIMAL	20	
					TALLOW	ESTER	ANIMAL	20	
	0.8849	4.05			SOY	ESTER	PLANT	100	
666		2.8						0	
					SOY	ESTER	PLANT	20	
642	0.8476	2.7						0	
642	0.8476	2.7						0	
658	0.8302	2.5						0	
638		3.34						0	
515		1.3						0	
		4.066			SOY	ESTER	PLANT	100	
		4.735			YELLOW GREASE	ESTER	ANIMAL	100	
					SOY	ESTER	PLANT	1	
636	0.8035	3.346			SOY	ESTER	PLANT	20	
638	0.8607	3.822			SOY	ESTER	PLANT	80	
654					SOY	ESTER	PLANT	20	
654					SOY	ESTER	PLANT	20	
658	0.8403				SOY	ESTER	PLANT	20	
659	0.852				YELLOW GREASE	ESTER	ANIMAL	20	
659	0.8388				YELLOW GREASE	ESTER	ANIMAL	20	
651		2.2			SOY	ESTER	PLANT	50	
	0.8314							0	
	0.886							100	
	0.8448							20	

EQUIP_ID	STUDY_ID	CLASS	EQUIP_TYPE	COMPANY	HIGHWAY	MODEL_NAME	MODEL_YR
2000-01-1967-N14	2000-01-1967	HEAVY-DUTY	ENGINE	CUMMINS	YES	N14	1997
2000-01-1967-S50	2000-01-1967	HEAVY-DUTY	ENGINE	DETROIT	YES	SERIES 50	1997
2000-01-1967-S50C	2000-01-1967	HEAVY-DUTY	ENGINE	DETROIT	YES	SERIES 50	1997
2000-01-1967-B59	2000-01-1967	HEAVY-DUTY	ENGINE	CUMMINS	YES	B5.9	1995
2000-01-1967-B59C	2000-01-1967	HEAVY-DUTY	ENGINE	CUMMINS	YES	B5.9	1995
2000-01-1969-A	2000-01-1969	HEAVY-DUTY	ENGINE	JOHN DEERE	NO	CD6068TL052	1990
2000-01-1969-B	2000-01-1969	HEAVY-DUTY	ENGINE	JOHN DEERE	NO	6081T	1990
2000-01-1969-AC	2000-01-1969	HEAVY-DUTY	ENGINE	JOHN DEERE	NO	CD6068TL052	1990
2000-01-1969-BC	2000-01-1969	HEAVY-DUTY	ENGINE	JOHN DEERE	NO	6081T	1990
MCCORMICK_97-6V92	MCCORMICK_97	HEAVY-DUTY	ENGINE	DETROIT	YES	6VF-183607-807-3B21	1989
MCCORMICK_97-60	MCCORMICK_97	HEAVY-DUTY	ENGINE	DETROIT	YES	6R-544	1991
972904-0	972904	HEAVY-DUTY	ENGINE	DETROIT	YES		1991
972904-3	972904	HEAVY-DUTY	ENGINE	DETROIT	YES		1991
972904-5	972904	HEAVY-DUTY	ENGINE	DETROIT	YES		1991
962233-A	962233	HEAVY-DUTY	ENGINE	CUMMINS	YES	6BTA	1991
961114-B	961114	HEAVY-DUTY	VEHICLE	CUMMINS	YES		1994
HOWES_81-DDC	HOWES_81	HEAVY-DUTY	VEHICLE	DETROIT	YES	FLEXBL BUS	1989
STOTLER_95-CEC	STOTLER_95	HEAVY-DUTY	ENGINE	CUMMINS	YES	L10	1987
STOTLER_95-DDC	STOTLER_95	HEAVY-DUTY	ENGINE	DETROIT	YES	6V92TA	1987
952388-6V92A	952388	HEAVY-DUTY	VEHICLE	DETROIT	YES	6V92TA	1987
FOSSEEN_71N-DDC	FOSSEEN_71N	HEAVY-DUTY	ENGINE	DETROIT	YES	6V-71N	1977
PETERSON_94-A	PETERSON_94		VEHICLE				
NIPER_93A	NIPER_93	HEAVY-DUTY	ENGINE	CUMMINS	YES		1991
932734A	932734	HEAVY-DUTY	ENGINE	DETROIT	YES	SERIES 60	1991
SHARP_96-CEC	SHARP_96	HEAVY-DUTY	ENGINE	CUMMINS	YES	B5.9	1995
SHARP_96-CEC-WCAT	SHARP_96	HEAVY-DUTY	ENGINE	CUMMINS	YES	B5.9	1995
MARSHALLA	MARSHALL	HEAVY-DUTY	ENGINE	CUMMINS	YES	L10E	1992
1999-01-1117A	1999-01-1117	HEAVY-DUTY	ENGINE	NAVISTAR	YES	T444E	1994
971689A	971689	HEAVY-DUTY	ENGINE	VOLVO	YES	THD103KF	1994
HOWES_88-6V92A	HOWES_88	HEAVY-DUTY	VEHICLE	DETROIT	YES	6V92TA	1989
950400A	950400	HEAVY-DUTY	ENGINE	CATERPILLAR	NO	3304PCNA	1983
950400ADOC	950400	HEAVY-DUTY	ENGINE	CATERPILLAR	NO	3304PCNA	1983
961166-60	961166	HEAVY-DUTY	ENGINE	DETROIT	YES	SERIES 60	1991
MANICOM-6V92	MANICOM_93	HEAVY-DUTY	ENGINE	DETROIT	YES	6V92TA	1991
GOETZ_SOYATEDDC	GOETZ_SOYATE	HEAVY-DUTY	ENGINE	DETROIT	YES	6V92TA	1991
GOETZ_TALLOWDDC	GOETZ_TALLOW	HEAVY-DUTY	ENGINE	DETROIT	YES	6V92TA	1991
932686-A	932686	HEAVY-DUTY	ENGINE	MISC	YES	SCANIA D5952	1990
932686-B	932686	HEAVY-DUTY	ENGINE	MISC	YES	VALMET 634DS	1990
932686-C	932686	HEAVY-DUTY	ENGINE	VOLVO	YES	THD101GC	1990
830377-A	830377	HEAVY-DUTY	ENGINE	MACK	YES	EM6-300	1980
SIRMAN_98-DB	SIRMAN_98	LIGHT-DUTY	ENGINE	DBENZ	YES	OM611	1998
SHARP_94-92TADDC	SHARP_94-92TA	HEAVY-DUTY	ENGINE	DETROIT	YES	6V92TA	1988
SHARP_94-92TADDCW	SHARP_94-92TA	HEAVY-DUTY	ENGINE	DETROIT	YES	6V92TA	1988
SHARP_94-60-A	SHARP_94-60	HEAVY-DUTY	ENGINE	DETROIT	YES	SERIES 60	1991
PETERSON_99-CEC	PETERSON_99	HEAVY-DUTY	VEHICLE	CUMMINS	YES	B5.9	1995
PETERSON_99-CECW	PETERSON_99	HEAVY-DUTY	VEHICLE	CUMMINS	YES	B5.9	1995
FOSSEEN_92TADDC	FOSSEEN_92TA	HEAVY-DUTY	ENGINE	DETROIT	YES	6V92TA	1989
FOSSEEN_92TADDC14	FOSSEEN_92TA	HEAVY-DUTY	ENGINE	DETROIT	YES	6V92TA	1989
FOSSEEN_92TADDC14	FOSSEEN_92TA	HEAVY-DUTY	ENGINE	DETROIT	YES	6V92TA	1989
CALLAHAN_93T0	CALLAHAN_93	HEAVY-DUTY	ENGINE	DETROIT	YES	6V92TA	1998
CALLAHAN_93T3	CALLAHAN_93	HEAVY-DUTY	ENGINE	DETROIT	YES	6V92TA	1998
CALLAHAN_93-D60	CALLAHAN_93	HEAVY-DUTY	ENGINE	DETROIT	YES	DDC SERIES 60	1991
CALLAHAN_93-6V	CALLAHAN_93	HEAVY-DUTY	ENGINE	DETROIT	YES	6V92TA	1988
CALLAHAN_93-6VMOD	CALLAHAN_93	HEAVY-DUTY	ENGINE	DETROIT	YES	6V92TA	1988
GRABOSKI_00-A	GRABOSKI_00	HEAVY-DUTY	ENGINE	DETROIT	YES	SERIES 60	1991
SMITH_98-A	SMITH_98	HEAVY-DUTY	ENGINE	CATERPILLAR	YES	3406E	1997
MCCORMICK_01-A	MCCORMICK_01	HEAVY-DUTY	ENGINE	DETROIT	YES	DDC SERIES 60	1991
DURBIN_99-RAM2500	DURBIN_99	HEAVY-DUTY	VEHICLE	CHRYSLER	YES	RAM 2500	1996
DURBIN_99-F350	DURBIN_99	HEAVY-DUTY	VEHICLE	FORD	YES	F-350	1995
DURBIN_99-RAM250	DURBIN_99	HEAVY-DUTY	VEHICLE	CHRYSLER	YES	RAM 250	1990
DURBIN_99-F250	DURBIN_99	HEAVY-DUTY	VEHICLE	FORD	YES	F-250	1988

MAKE	DISP	LITE	FI TYPE	ASPIRATED	CYLINDER	CAT TYPE	EGR TYPE	ENG SERIES	COOLING	FI METH	FI_PRESS	PART TRAF	ENG CYCL
	14	DIRECT	TURBO		6	NONE	NONE	N14	AIR_AIR	DI		NO	4
		DIRECT	TURBO		4	NONE	NONE	SERIES 50	AIR_AIR	DI		NO	4
		DIRECT	TURBO		4	OXID	NONE	SERIES 50	AIR_AIR	DI		NO	4
	5.9	DIRECT	TURBO		6	NONE	NONE	B5.9	AIR_AIR	DI		NO	4
	5.9	DIRECT	TURBO		6	OXID	NONE	B5.9	AIR_AIR	DI		NO	4
	6.79	DIRECT	TURBO		6	NONE	NONE	CD6068TL052	NONE	DI	26000	NO	4
	8.1	DIRECT	TURBO		6	NONE	NONE	6068T	NONE	DI	29000	NO	4
	6.79	DIRECT	TURBO		6	OXID	NONE	CD6068TL052	NONE	DI	26000	NO	4
	8.1	DIRECT	TURBO		6	OXID	NONE	6068T	NONE	DI	29000	NO	4
	9	DIRECT	TURBO		6	NONE	NONE	6V92	AIR_LIQ	DI		NO	2
	11.1	DIRECT	TURBO		6	NONE	NONE	SERIES 60	AIR_LIQ	DI		NO	4
	12.7	DIRECT	TURBO		6	NONE	NONE	SERIES 60	AIR_LIQ	DI		NO	4
	12.7	DIRECT	TURBO		6	NONE	NONE	SERIES 60	AIR_LIQ	DI		NO	4
	12.7	DIRECT	TURBO		6	NONE	NONE	SERIES 60	AIR_LIQ	DI		NO	4
CHRYSLER	5.9	DIRECT	TURBO		6	NONE	NONE	6BTA	AIR_LIQ	DI		NO	4
CHRYSLER	5.9	DIRECT	TURBO		6	NONE	NONE		AIR_LIQ	DI		NO	4
			TURBO		8	NULL	NONE	DDC 8V71					
	10	DIRECT			6	NONE	NONE	L10		DI			4
	9.05	DIRECT			6	NONE	NONE	6V92		DI			2
		DIRECT	TURBO				NONE	NONE		DI			2
	7	DIRECT			6	NULL	NONE			DI			0
	10	DIRECT	TURBO		6	NONE		L10-280E		DI			4
	11.1	DIRECT	TURBO		6	NONE	NONE	SERIES 60	AIR_AIR	DI		NO	4
	5.9	DIRECT	TURBO		6	NONE	NONE	B	AIR_LIQ	DI		NO	4
	5.9	DIRECT	TURBO		6	OXID	NONE	B	AIR_LIQ	DI		NO	4
	10	DIRECT	TURBO		6	NONE	NONE	L10		DI		NO	4
	7.3	DIRECT	TURBO		8	NONE	NONE	T444E	AIR_AIR	DI		NO	4
		DIRECT	TURBO		6	NULL	NONE		AIR_LIQ	DI			0
			TURBO		6	NONE	NONE	DDECII		DI		NO	
	7	INDIR	NATURAL			NONE	NONE		NONE	IDI			
	7	INDIR	NATURAL			OXID	NONE		NONE	IDI			
		DIRECT	TURBO			NONE	NONE		AIR_LIQ	DI		NO	4
		DIRECT	TURBO		6	NONE	NONE	6V92TA	AIR_LIQ	DI		NO	4
	9	DIRECT	TURBO		6	NONE	NONE	6V92TA	AIR_LIQ	DI		NO	2
	9	DIRECT	TURBO		6	NONE	NONE	6V92TA	AIR_LIQ	DI		NO	2
	8.5	DIRECT	TURBO		6	NONE	NONE	D5952	NONE	DI		NO	4
	7.4	DIRECT	TURBO		6	NONE	NONE	634DS	NONE	DI		NO	4
	9.6	DIRECT	TURBO		6	NONE	NONE	THD1016C	NONE	DI		NO	4
		DIRECT	TURBO		6	NONE	NONE	EM6-300	AIR_LIQ	DI		NO	4
	2.2	DIRECT	TURBO			NONE	COOLED		AIR_AIR	DI		NO	4
	9	DIRECT	TURBO		6	NONE	NONE	92TA	AIR_LIQ	DI		NO	2
	9	DIRECT	TURBO		6	NONE	NONE	92TA	AIR_LIQ	DI		NO	2
	12.7	DIRECT	TURBO		6	NONE	NONE			DI		NO	4
DODGE R/	5.9	DIRECT	TURBO		6	NONE	NONE	B5.9		DI		NO	4
DODGE R/	5.9	DIRECT	TURBO		6	OXID	NONE	B5.9		DI		NO	4
	9	DIRECT			6	NULL	NONE			DI			2
	9	DIRECT			6	NULL	NONE			DI			2
	9	DIRECT			6	NULL	NONE			DI			2
	9	DIRECT	TURBO		6	NONE		6V92TA		DI			2
	9	DIRECT	TURBO		6	NONE		6V92TA		DI			2
	12.7	DIRECT	TURBO		6	NONE	NONE	SERIES 60	AIR_AIR	DI		NO	4
	9.3	DIRECT	TURBO		6	NONE	NONE	6V92TA	AIR_LIQ	DI		NO	2
	9.3	DIRECT	TURBO		6	NONE	NONE	6V92TA	AIR_LIQ	DI		NO	2
	11.1	DIRECT	TURBO		6	NONE	NONE	SERIES 60	AIR_LIQ	DI		NO	4
	14.6	DIRECT	TURBO		6	NONE	NONE		AIR_AIR	DI		NO	4
	11.1	DIRECT	TURBO		6	NONE	NONE	SERIES 60	AIR_AIR	DI		NO	4
DODGE	5.9	DIRECT	TURBO			OXID	NONE					NO	4
FORD	7.3	DIRECT	TURBO			OXID	NONE					NO	4
DODGE	5.9	DIRECT	TURBO			NONE	NONE					NO	4
FORD	7.3	INDIRECT	NATURAL			NONE	NONE					NO	4

ATED	POW	ATED	SPEE	IDLE	RPM	ROC	ODO	DUR	MET	GVWR	K	TORQU	K	T	SPEE	YL	VALVE	STROKE	BORE	INJ	CTRL	INJ	PCAT
370	1800	600					125					1450		1200				5.9	5.4	ESSCD	U		
275	2100	600					125					890		1200							ESSCD	U	
275							125														ESSCD	U	
160	2500	700					175					400		1600			4.7		4	M		P	
160	2500	700					175					400		1600			4.7		4	M		P	
135	2100														2	5			4.2	M		R	
166	2100														2	5			4.6	M		P	
135	2100														2	5			4.2	M		R	
166	2100														2	5			4.6	M		P	
275	2200	600										833		1200						ESSCD	U		
345	1800	600										1335		1800						ESSCD	U		
350	1800	600										1350		1300	4		6.3		5.12	ESSCD	U		
350	1800	600										1350		1300	4		6.3		5.12	ESSCD	U		
350	1800	600										1350		1300	4		6.3		5.12	ESSCD	U		
							3900														ESSCD	U	
																					ESSCD	U	
																					M		U
																					M		U
																					M		U
																					M		U
169	2000											550		1000									
280	2000											900		1600						M		U	
330	1800	600										1270		1200			5.47		5.12	ESSCD	U		
160	2500											400		1600						M		P	
160	2500											400		1600						M		P	
280	2000											900		1200						ESSCD	U		
185	2550											443		1510						ESSCD	U		
228	2000																						
100	2220											280		1200									
100	2220											280		1200									
																					ESSCD	U	
277	2100	600										660		1200						ESSCD	U		
277																				ESSCD	U		
277																				ESSCD	U		
251	2200											738		1350						M		P	
197	2200											579		1500						M		P	
239	2200											656		1400						M		P	
308	2100											1109		1260			4			M		P	
125	4200											220		2200	4		88.4		88	ESSCD	C		
300	2100											1020		1200						ESSCD	U		
300	2100											1020		1200						ESSCD	U		
370	1800											1450		1200						ESSCD	U		
							92838																
							92838																
277	2100																			M		U	
277	2100																			M		U	
277	2100																			M		U	
																					ESSCD		
																					ESSCD		
400	2100											1450		1200						ESSCD	U		
277	2100											880		1200						ESSCD	U		
277	2100											880		1200						ESSCD	U		
345	1800	600										1335		1200						ESSCD	U		
435	1800											1250		1200			6.5		5.4	ESSCD	U		
345	1800	600										1335		1200						ESSCD	U		
							9838																
							33217																
							115734																
							76469																

TEST ID	STUDY ID	FBATCH ID	EQUIP ID	EST_PROD
2000-01-1967-2	2000-01-1967	2000-01-1967-B100	2000-01-1967-N14	UDDS
2000-01-1967-3	2000-01-1967	2000-01-1967-B100	2000-01-1967-N14	UDDS
2000-01-1967-4	2000-01-1967	2000-01-1967-B100	2000-01-1967-N14	UDDS
2000-01-1967-5	2000-01-1967	2000-01-1967-B100	2000-01-1967-N14	UDDS
2000-01-1967-6	2000-01-1967	2000-01-1967-B100	2000-01-1967-N14	UDDS
2000-01-1967-7	2000-01-1967	2000-01-1967-B100	2000-01-1967-N14	UDDS
2000-01-1967-8	2000-01-1967	2000-01-1967-2D	2000-01-1967-N14	UDDS
2000-01-1967-9	2000-01-1967	2000-01-1967-2D	2000-01-1967-N14	UDDS
2000-01-1967-10	2000-01-1967	2000-01-1967-2D	2000-01-1967-N14	UDDS
2000-01-1967-11	2000-01-1967	2000-01-1967-2D	2000-01-1967-N14	UDDS
2000-01-1967-12	2000-01-1967	2000-01-1967-2D	2000-01-1967-N14	UDDS
2000-01-1967-13	2000-01-1967	2000-01-1967-2D	2000-01-1967-N14	UDDS
2000-01-1967-14	2000-01-1967	2000-01-1967-B20	2000-01-1967-N14	UDDS
2000-01-1967-15	2000-01-1967	2000-01-1967-B20	2000-01-1967-N14	UDDS
2000-01-1967-16	2000-01-1967	2000-01-1967-B100	2000-01-1967-S50	UDDS
2000-01-1967-17	2000-01-1967	2000-01-1967-B100	2000-01-1967-S50	UDDS
2000-01-1967-18	2000-01-1967	2000-01-1967-B100	2000-01-1967-S50	UDDS
2000-01-1967-19	2000-01-1967	2000-01-1967-B100	2000-01-1967-S50	UDDS
2000-01-1967-20	2000-01-1967	2000-01-1967-B100	2000-01-1967-S50C	UDDS
2000-01-1967-21	2000-01-1967	2000-01-1967-B100	2000-01-1967-S50C	UDDS
2000-01-1967-22	2000-01-1967	2000-01-1967-B20	2000-01-1967-S50	UDDS
2000-01-1967-23	2000-01-1967	2000-01-1967-B20	2000-01-1967-S50	UDDS
2000-01-1967-24	2000-01-1967	2000-01-1967-B20	2000-01-1967-S50C	UDDS
2000-01-1967-25	2000-01-1967	2000-01-1967-2D	2000-01-1967-S50	UDDS
2000-01-1967-26	2000-01-1967	2000-01-1967-2D	2000-01-1967-S50	UDDS
2000-01-1967-27	2000-01-1967	2000-01-1967-2D	2000-01-1967-S50C	UDDS
2000-01-1967-28	2000-01-1967	2000-01-1967-2D	2000-01-1967-S50C	UDDS
2000-01-1967-29	2000-01-1967	2000-01-1967-B100	2000-01-1967-B59	UDDS
2000-01-1967-30	2000-01-1967	2000-01-1967-B100	2000-01-1967-B59	UDDS
2000-01-1967-31	2000-01-1967	2000-01-1967-B100	2000-01-1967-B59	UDDS
2000-01-1967-32	2000-01-1967	2000-01-1967-B100	2000-01-1967-B59	UDDS
2000-01-1967-33	2000-01-1967	2000-01-1967-B100	2000-01-1967-B59C	UDDS
2000-01-1967-34	2000-01-1967	2000-01-1967-B100	2000-01-1967-B59C	UDDS
2000-01-1967-35	2000-01-1967	2000-01-1967-B20	2000-01-1967-B59	UDDS
2000-01-1967-36	2000-01-1967	2000-01-1967-B20	2000-01-1967-B59	UDDS
2000-01-1967-37	2000-01-1967	2000-01-1967-B20	2000-01-1967-B59C	UDDS
2000-01-1967-38	2000-01-1967	2000-01-1967-B20	2000-01-1967-B59C	UDDS
2000-01-1967-39	2000-01-1967	2000-01-1967-2D	2000-01-1967-B59	UDDS
2000-01-1967-40	2000-01-1967	2000-01-1967-2D	2000-01-1967-B59	UDDS
2000-01-1967-41	2000-01-1967	2000-01-1967-2D	2000-01-1967-B59C	UDDS
2000-01-1967-42	2000-01-1967	2000-01-1967-2D	2000-01-1967-B59C	UDDS
2000-01-1969-43	2000-01-1969	2000-01-1969-RME	2000-01-1969-AC	8M_C1
2000-01-1969-44	2000-01-1969	2000-01-1969-BASE	2000-01-1969-AC	8M_C1
2000-01-1969-45	2000-01-1969	2000-01-1969-RME	2000-01-1969-A	8M_C1
2000-01-1969-46	2000-01-1969	2000-01-1969-BASE	2000-01-1969-A	8M_C1
2000-01-1969-47	2000-01-1969	2000-01-1969-RME	2000-01-1969-BC	8M_C1
2000-01-1969-48	2000-01-1969	2000-01-1969-RME	2000-01-1969-B	8M_C1
2000-01-1969-49	2000-01-1969	2000-01-1969-BASE	2000-01-1969-BC	8M_C1
2000-01-1969-50	2000-01-1969	2000-01-1969-BASE	2000-01-1969-B	8M_C1
MCCORMICK_97-51	MCCORMICK_97	MCCORMICK_97-SOY1	MCCORMICK_97-6V92	UDDSH

TEST_ID	STUDY_ID	F BATCH_ID	EQUIP_ID	EST_PRO
MCCORMICK_97-52	MCCORMICK_97	MCCORMICK_97-SOY1	MCCORMICK_97-6V92	UDDSH
MCCORMICK_97-53	MCCORMICK_97	MCCORMICK_97-SOY1	MCCORMICK_97-6V92	UDDSH
MCCORMICK_97-54	MCCORMICK_97	MCCORMICK_97-SOY1	MCCORMICK_97-6V92	UDDSH
MCCORMICK_97-55	MCCORMICK_97	MCCORMICK_97-2D	MCCORMICK_97-6V92	UDDSH
MCCORMICK_97-56	MCCORMICK_97	MCCORMICK_97-2D	MCCORMICK_97-6V92	UDDSH
MCCORMICK_97-57	MCCORMICK_97	MCCORMICK_97-2D	MCCORMICK_97-60	UDDSH
MCCORMICK_97-58	MCCORMICK_97	MCCORMICK_97-2D	MCCORMICK_97-60	UDDSH
MCCORMICK_97-59	MCCORMICK_97	MCCORMICK_97-2D	MCCORMICK_97-60	UDDSH
MCCORMICK_97-60	MCCORMICK_97	MCCORMICK_97-2D	MCCORMICK_97-60	UDDSH
MCCORMICK_97-61	MCCORMICK_97	MCCORMICK_97-SOY2	MCCORMICK_97-60	UDDSH
MCCORMICK_97-62	MCCORMICK_97	MCCORMICK_97-SOY2	MCCORMICK_97-60	UDDSH
MCCORMICK_97-63	MCCORMICK_97	MCCORMICK_97-SOY2	MCCORMICK_97-60	UDDSH
MCCORMICK_97-64	MCCORMICK_97	MCCORMICK_97-SOY2	MCCORMICK_97-60	UDDSH
MCCORMICK_97-65	MCCORMICK_97	MCCORMICK_97-SOY2	MCCORMICK_97-60	UDDSH
MCCORMICK_97-66	MCCORMICK_97	MCCORMICK_97-2D	MCCORMICK_97-60	UDDSH
MCCORMICK_97-67	MCCORMICK_97	MCCORMICK_97-2D	MCCORMICK_97-60	UDDSH
MCCORMICK_97-68	MCCORMICK_97	MCCORMICK_97-2D	MCCORMICK_97-60	UDDSH
972904-69	972904	972904-A	972904-0	UDDSH
972904-70	972904	972904-A	972904-0	UDDSH
972904-71	972904	972904-A	972904-0	UDDSH
972904-72	972904	972904-A	972904-3	UDDSH
972904-73	972904	972904-A	972904-3	UDDSH
972904-74	972904	972904-A	972904-3	UDDSH
972904-75	972904	972904-A	972904-5	UDDSH
972904-76	972904	972904-A	972904-5	UDDSH
972904-77	972904	972904-A	972904-5	UDDSH
972904-78	972904	972904-B	972904-0	UDDSH
972904-79	972904	972904-B	972904-0	UDDSH
972904-80	972904	972904-B	972904-0	UDDSH
972904-81	972904	972904-B	972904-3	UDDSH
972904-82	972904	972904-B	972904-3	UDDSH
972904-83	972904	972904-B	972904-3	UDDSH
972904-84	972904	972904-B	972904-5	UDDSH
972904-85	972904	972904-B	972904-5	UDDSH
972904-86	972904	972904-B	972904-5	UDDSH
962233-87	962233	962233-2D	962233-A	UDDS
962233-88	962233	962233-BD	962233-A	UDDS
961114-89	961114	961114-100REE	961114-B	UDDS
961114-90	961114	961114-D2	961114-B	UDDS
961114-91	961114	961114-20REE	961114-B	UDDS
961114-92	961114	961114-50REE	961114-B	UDDS

TEST_ID	STUDY_ID	F BATCH_ID	EQUIP_ID	EST_PRO
HOWES_81-93	HOWES_81	HOWES_81-LS	HOWES_81-DDC	TRANSIE NT-1
HOWES_81-94	HOWES_81	HOWES_81-LS	HOWES_81-DDC	TRANSIE NT-1
HOWES_81-95	HOWES_81	HOWES_81-LS	HOWES_81-DDC	TRANSIE NT-1
HOWES_81-96	HOWES_81	HOWES_81-LS	HOWES_81-DDC	TRANSIE NT-2
HOWES_81-97	HOWES_81	HOWES_81-LS	HOWES_81-DDC	TRANSIE NT-2
HOWES_81-98	HOWES_81	HOWES_81-LS	HOWES_81-DDC	TRANSIE NT-2
HOWES_81-99	HOWES_81	HOWES_81-LS	HOWES_81-DDC	TRANSIE NT-3
HOWES_81-100	HOWES_81	HOWES_81-LS	HOWES_81-DDC	TRANSIE NT-3
HOWES_81-101	HOWES_81	HOWES_81-LS	HOWES_81-DDC	TRANSIE NT-3
HOWES_81-102	HOWES_81	HOWES_81-B20	HOWES_81-DDC	TRANSIE NT-1
HOWES_81-103	HOWES_81	HOWES_81-B20	HOWES_81-DDC	TRANSIE NT-1
HOWES_81-104	HOWES_81	HOWES_81-B20	HOWES_81-DDC	TRANSIE NT-1
HOWES_81-105	HOWES_81	HOWES_81-B20	HOWES_81-DDC	TRANSIE NT-2
HOWES_81-106	HOWES_81	HOWES_81-B20	HOWES_81-DDC	TRANSIE NT-2
HOWES_81-107	HOWES_81	HOWES_81-B20	HOWES_81-DDC	TRANSIE NT-2
HOWES_81-108	HOWES_81	HOWES_81-B20	HOWES_81-DDC	TRANSIE NT-3
HOWES_81-109	HOWES_81	HOWES_81-B20	HOWES_81-DDC	TRANSIE NT-3
HOWES_81-110	HOWES_81	HOWES_81-B20	HOWES_81-DDC	TRANSIE NT-3
STOTLER_95-111	STOTLER_95	STOTLER_95-LSRD	STOTLER_95-CEC	UDDSH
STOTLER_95-112	STOTLER_95	STOTLER_95-B20	STOTLER_95-CEC	UDDSH
STOTLER_95-113	STOTLER_95	STOTLER_95-LSRD	STOTLER_95-DDC	UDDSH
STOTLER_95-114	STOTLER_95	STOTLER_95-B20	STOTLER_95-DDC	UDDSH
952388-115	952388	952388-EPA	952388-6V92A	UDDSH
952388-116	952388	952388-ARB1	952388-6V92A	UDDSH
952388-117	952388	952388-ARB2	952388-6V92A	UDDSH
952388-118	952388	952388-20SME	952388-6V92A	UDDSH
952388-119	952388	952388-30SME	952388-6V92A	UDDSH
952388-120	952388	952388-40SME	952388-6V92A	UDDSH
952388-121	952388	952388-CME6ARB1	952388-6V92A	UDDSH
952388-122	952388	952388-CME20ARB1	952388-6V92A	UDDSH
952388-123	952388	952388-CME40ARB1	952388-6V92A	UDDSH
952388-124	952388	952388-CME6EPA	952388-6V92A	UDDSH
952388-125	952388	952388-CME10EPA	952388-6V92A	UDDSH

TEST_ID	STUDY_ID	FBATCH_ID	EQUIP_ID	EST_PRO
952388-126	952388	952388-CME20EPA	952388-6V92A	UDDSH
FOSSEEN_71N-127	FOSSEEN_71N	FOSSEEN_71N-2D	FOSSEEN_71N-DDC	UDDS
FOSSEEN_71N-128	FOSSEEN_71N	FOSSEEN_71N-2D	FOSSEEN_71N-DDC	UDDS
FOSSEEN_71N-129	FOSSEEN_71N	FOSSEEN_71N-2D	FOSSEEN_71N-DDC	UDDS
FOSSEEN_71N-130	FOSSEEN_71N	FOSSEEN_71N-BLEND	FOSSEEN_71N-DDC	UDDS
FOSSEEN_71N-131	FOSSEEN_71N	FOSSEEN_71N-BLEND	FOSSEEN_71N-DDC	UDDS
FOSSEEN_71N-132	FOSSEEN_71N	FOSSEEN_71N-BLEND	FOSSEEN_71N-DDC	UDDS
PETERSON_94-133	PETERSON_94	PETERSON_94-BASE	PETERSON_94-A	TRANSIENT
PETERSON_94-134	PETERSON_94	PETERSON_94-REE20	PETERSON_94-A	TRANSIENT
PETERSON_94-135	PETERSON_94	PETERSON_94-REE50	PETERSON_94-A	TRANSIENT
PETERSON_94-136	PETERSON_94	PETERSON_94-REE	PETERSON_94-A	TRANSIENT
NIPER_93-137	NIPER_93	NIPER_93LS	NIPER_93A	STEADY-STATE
NIPER_93-138	NIPER_93	NIPER_93TME	NIPER_93A	STEADY-STATE
NIPER_93-139	NIPER_93	NIPER_93T20	NIPER_93A	STEADY-STATE
NIPER_93-140	NIPER_93	NIPER_93T20MS10	NIPER_93A	STEADY-STATE
NIPER_93-141	NIPER_93	NIPER_93GME	NIPER_93A	STEADY-STATE
NIPER_93-142	NIPER_93	NIPER_93GME20	NIPER_93A	STEADY-STATE
932734-143	932734	932734REF	932734A	UDDSH
932734-144	932734	932734REF	932734A	UDDSH
932734-145	932734	932734REF	932734A	UDDSH
932734-146	932734	932734REF	932734A	UDDSH
932734-147	932734	932734MS	932734A	UDDSH
932734-148	932734	932734MS	932734A	UDDSH
932734-149	932734	932734MS	932734A	UDDSH
932734-150	932734	932734MS	932734A	UDDSH
SHARP_96-151	SHARP_96	SHARP_96-2D	SHARP_96-CEC	UDDS
SHARP_96-152	SHARP_96	SHARP_96-2D	SHARP_96-CEC	UDDS
SHARP_96-153	SHARP_96	SHARP_96-2D	SHARP_96-CEC-WCAT	UDDS
SHARP_96-154	SHARP_96	SHARP_96-2D	SHARP_96-CEC-WCAT	UDDS
SHARP_96-155	SHARP_96	SHARP_96-2D	SHARP_96-CEC	UDDS
SHARP_96-156	SHARP_96	SHARP_96-2D	SHARP_96-CEC	UDDS
SHARP_96-157	SHARP_96	SHARP_96-REE	SHARP_96-CEC	UDDS
SHARP_96-158	SHARP_96	SHARP_96-REE	SHARP_96-CEC	UDDS
SHARP_96-159	SHARP_96	SHARP_96-REE	SHARP_96-CEC-WCAT	UDDS

TEST_ID	STUDY_ID	FBATCH_ID	EQUIP_ID	EST_PRO
SHARP_96-160	SHARP_96	SHARP_96-REE	SHARP_96-CEC-WCAT	UDDS
SHARP_96-161	SHARP_96	SHARP_96-REE	SHARP_96-CEC	UDDS
SHARP_96-162	SHARP_96	SHARP_96-REE	SHARP_96-CEC	UDDS
SHARP_96-163	SHARP_96	SHARP_96-RME	SHARP_96-CEC	UDDS
SHARP_96-164	SHARP_96	SHARP_96-RME	SHARP_96-CEC	UDDS
SHARP_96-165	SHARP_96	SHARP_96-RME	SHARP_96-CEC-WCAT	UDDS
SHARP_96-166	SHARP_96	SHARP_96-RME	SHARP_96-CEC-WCAT	UDDS
SHARP_96-167	SHARP_96	SHARP_96-REE50	SHARP_96-CEC	UDDS
SHARP_96-168	SHARP_96	SHARP_96-REE50	SHARP_96-CEC	UDDS
SHARP_96-169	SHARP_96	SHARP_96-REE50	SHARP_96-CEC-WCAT	UDDS
SHARP_96-170	SHARP_96	SHARP_96-REE50	SHARP_96-CEC-WCAT	UDDS
SHARP_96-171	SHARP_96	SHARP_96-RME50	SHARP_96-CEC	UDDS
SHARP_96-172	SHARP_96	SHARP_96-RME50	SHARP_96-CEC	UDDS
SHARP_96-173	SHARP_96	SHARP_96-RME50	SHARP_96-CEC-WCAT	UDDS
SHARP_96-174	SHARP_96	SHARP_96-RME50	SHARP_96-CEC-WCAT	UDDS
SHARP_96-175	SHARP_96	SHARP_96-REE20	SHARP_96-CEC	UDDS
SHARP_96-176	SHARP_96	SHARP_96-REE20	SHARP_96-CEC	UDDS
SHARP_96-177	SHARP_96	SHARP_96-REE20	SHARP_96-CEC-WCAT	UDDS
SHARP_96-178	SHARP_96	SHARP_96-REE20	SHARP_96-CEC-WCAT	UDDS
SHARP_96-179	SHARP_96	SHARP_96-RME20	SHARP_96-CEC	UDDS
SHARP_96-180	SHARP_96	SHARP_96-RME20	SHARP_96-CEC	UDDS
SHARP_96-181	SHARP_96	SHARP_96-RME20	SHARP_96-CEC-WCAT	UDDS
SHARP_96-182	SHARP_96	SHARP_96-RME20	SHARP_96-CEC-WCAT	UDDS
MARSHALL-183	MARSHALL	MARSHALL-DF	MARSHALLA	UDDSH
MARSHALL-184	MARSHALL	MARSHALL-DF	MARSHALLA	UDDSH
MARSHALL-185	MARSHALL	MARSHALL-DF	MARSHALLA	UDDSH
MARSHALL-186	MARSHALL	MARSHALL-B20	MARSHALLA	UDDSH
MARSHALL-187	MARSHALL	MARSHALL-B20	MARSHALLA	UDDSH
MARSHALL-188	MARSHALL	MARSHALL-B20	MARSHALLA	UDDSH
MARSHALL-189	MARSHALL	MARSHALL-B30	MARSHALLA	UDDSH
MARSHALL-190	MARSHALL	MARSHALL-B30	MARSHALLA	UDDSH
MARSHALL-191	MARSHALL	MARSHALL-B30	MARSHALLA	UDDSH
1999-01-1117-192	1999-01-1117	1999-01-1117DA	1999-01-1117A	UDDSH
1999-01-1117-193	1999-01-1117	1999-01-1117DA	1999-01-1117A	UDDSH
1999-01-1117-194	1999-01-1117	1999-01-1117DA	1999-01-1117A	UDDSH
1999-01-1117-195	1999-01-1117	1999-01-1117BD20	1999-01-1117A	UDDSH
1999-01-1117-196	1999-01-1117	1999-01-1117BD20	1999-01-1117A	UDDSH
1999-01-1117-197	1999-01-1117	1999-01-1117BD20	1999-01-1117A	UDDSH
1999-01-1117-198	1999-01-1117	1999-01-1117BD50	1999-01-1117A	UDDSH
1999-01-1117-199	1999-01-1117	1999-01-1117BD50	1999-01-1117A	UDDSH

TEST_ID	STUDY_ID	FBATCH_ID	EQUIP_ID	EST_PRO
1999-01-1117-200	1999-01-1117	1999-01-1117BD50	1999-01-1117A	UDDSH
1999-01-1117-201	1999-01-1117	1999-01-1117BD100	1999-01-1117A	UDDSH
1999-01-1117-202	1999-01-1117	1999-01-1117BD100	1999-01-1117A	UDDSH
1999-01-1117-203	1999-01-1117	1999-01-1117BD100	1999-01-1117A	UDDSH
971689-204	971689	971689ULD	971689A	STEADY-STATE
971689-205	971689	971689RME	971689A	STEADY-STATE
HOWES_88-206	HOWES_88	HOWES_88-2D	HOWES_88-6V92A	TRANSIENT-1
HOWES_88-207	HOWES_88	HOWES_88-2D	HOWES_88-6V92A	TRANSIENT-1
HOWES_88-208	HOWES_88	HOWES_88-2D	HOWES_88-6V92A	TRANSIENT-1
HOWES_88-209	HOWES_88	HOWES_88-2D	HOWES_88-6V92A	TRANSIENT-2
HOWES_88-210	HOWES_88	HOWES_88-2D	HOWES_88-6V92A	TRANSIENT-2
HOWES_88-211	HOWES_88	HOWES_88-2D	HOWES_88-6V92A	TRANSIENT-2
HOWES_88-212	HOWES_88	HOWES_88-2D	HOWES_88-6V92A	TRANSIENT-3
HOWES_88-213	HOWES_88	HOWES_88-2D	HOWES_88-6V92A	TRANSIENT-3
HOWES_88-214	HOWES_88	HOWES_88-2D	HOWES_88-6V92A	TRANSIENT-3
HOWES_88-215	HOWES_88	HOWES_88-20SME	HOWES_88-6V92A	TRANSIENT-1
HOWES_88-216	HOWES_88	HOWES_88-20SME	HOWES_88-6V92A	TRANSIENT-1
HOWES_88-217	HOWES_88	HOWES_88-20SME	HOWES_88-6V92A	TRANSIENT-1
HOWES_88-218	HOWES_88	HOWES_88-20SME	HOWES_88-6V92A	TRANSIENT-2
HOWES_88-219	HOWES_88	HOWES_88-20SME	HOWES_88-6V92A	TRANSIENT-2
HOWES_88-220	HOWES_88	HOWES_88-20SME	HOWES_88-6V92A	TRANSIENT-2
HOWES_88-221	HOWES_88	HOWES_88-20SME	HOWES_88-6V92A	TRANSIENT-3
HOWES_88-222	HOWES_88	HOWES_88-20SME	HOWES_88-6V92A	TRANSIENT-3
HOWES_88-223	HOWES_88	HOWES_88-20SME	HOWES_88-6V92A	TRANSIENT-3
950400-224	950400	950400D2	950400A	8M_C1
950400-225	950400	950400SME	950400A	8M_C1
950400-226	950400	950400BLEND	950400A	8M_C1
950400-227	950400	950400D2	950400ADOC	8M_C1
950400-228	950400	950400SME	950400ADOC	8M_C1
950400-229	950400	950400BLEND	950400ADOC	8M_C1
961166-230	961166	961166-REF	961166-60	UDDSH

TEST_ID	STUDY_ID	FBATCH_ID	EQUIP_ID	EST_PROD
961166-231	961166	961166-REF	961166-60	UDDS
961166-232	961166	961166-REF	961166-60	UDDS
961166-233	961166	961166-REF	961166-60	UDDS
961166-234	961166	961166-REF	961166-60	UDDS
961166-235	961166	961166-REF	961166-60	UDDS
961166-236	961166	961166-REF	961166-60	UDDS
961166-237	961166	961166-REF	961166-60	UDDS
961166-238	961166	961166-REF	961166-60	UDDS
961166-239	961166	961166-REF	961166-60	UDDS
961166-240	961166	961166-REF	961166-60	UDDS
961166-241	961166	961166-REF	961166-60	UDDS
961166-242	961166	961166-REF	961166-60	UDDS
961166-243	961166	961166-REF	961166-60	UDDS
961166-244	961166	961166-REF	961166-60	UDDS
961166-245	961166	961166-20BD	961166-60	UDDS
961166-246	961166	961166-20BD	961166-60	UDDS
961166-247	961166	961166-20BD	961166-60	UDDS
961166-248	961166	961166-35BD	961166-60	UDDS
961166-249	961166	961166-35BD	961166-60	UDDS
961166-250	961166	961166-35BD	961166-60	UDDS
961166-251	961166	961166-65BD	961166-60	UDDS
961166-252	961166	961166-65BD	961166-60	UDDS
961166-253	961166	961166-65BD	961166-60	UDDS
961166-254	961166	961166-BD	961166-60	UDDS
961166-255	961166	961166-BD	961166-60	UDDS
961166-256	961166	961166-BD	961166-60	UDDS
MANICOM_93-257	MANICOM_93	MANICOM-REF	MANICOM-6V92	UDDS
MANICOM_93-258	MANICOM_93	MANICOM-REF	MANICOM-6V92	UDDS
MANICOM_93-259	MANICOM_93	MANICOM-REF	MANICOM-6V92	UDDS
MANICOM_93-260	MANICOM_93	MANICOM-REF	MANICOM-6V92	UDDS
MANICOM_93-261	MANICOM_93	MANICOM-B10	MANICOM-6V92	UDDS
MANICOM_93-262	MANICOM_93	MANICOM-B10	MANICOM-6V92	UDDS
MANICOM_93-263	MANICOM_93	MANICOM-B10	MANICOM-6V92	UDDS
MANICOM_93-264	MANICOM_93	MANICOM-B10	MANICOM-6V92	UDDS
MANICOM_93-265	MANICOM_93	MANICOM-B20	MANICOM-6V92	UDDS
MANICOM_93-266	MANICOM_93	MANICOM-B20	MANICOM-6V92	UDDS
MANICOM_93-267	MANICOM_93	MANICOM-B20	MANICOM-6V92	UDDS
MANICOM_93-268	MANICOM_93	MANICOM-B20	MANICOM-6V92	UDDS
MANICOM_93-269	MANICOM_93	MANICOM-B30	MANICOM-6V92	UDDS
MANICOM_93-270	MANICOM_93	MANICOM-B30	MANICOM-6V92	UDDS
MANICOM_93-271	MANICOM_93	MANICOM-B30	MANICOM-6V92	UDDS
MANICOM_93-272	MANICOM_93	MANICOM-B30	MANICOM-6V92	UDDS
MANICOM_93-273	MANICOM_93	MANICOM-B40	MANICOM-6V92	UDDS
MANICOM_93-274	MANICOM_93	MANICOM-B40	MANICOM-6V92	UDDS
MANICOM_93-275	MANICOM_93	MANICOM-B40	MANICOM-6V92	UDDS
MANICOM_93-276	MANICOM_93	MANICOM-B40	MANICOM-6V92	UDDS
GOETZ_SOYATE-277	GOETZ_SOYATE	GOETZ_SOYATED2	GOETZ_SOYATEDDC	UDDSH
GOETZ_SOYATE-278	GOETZ_SOYATE	GOETZ_SOYATESOY	GOETZ_SOYATEDDC	UDDSH

TEST_ID	STUDY_ID	F BATCH_ID	EQUIP_ID	EST_PRO
GOETZ_SOYATE-279	GOETZ_SOYATE	GOETZ_SOYATESOY	GOETZ_SOYATEDDC	UDDSH
GOETZ_SOYATE-280	GOETZ_SOYATE	GOETZ_SOYATED2	GOETZ_SOYATEDDC	UDDSH
GOETZ_SOYATE-281	GOETZ_SOYATE	GOETZ_SOYATED2	GOETZ_SOYATEDDC	UDDSH
GOETZ_SOYATE-282	GOETZ_SOYATE	GOETZ_SOYATED2	GOETZ_SOYATEDDC	UDDSH
GOETZ_TALLOW-283	GOETZ_TALLOW	GOETZ_TALLOWD2	GOETZ_TALLOWDDC	UDDS
GOETZ_TALLOW-284	GOETZ_TALLOW	GOETZ_TALLOWD2	GOETZ_TALLOWDDC	UDDS
GOETZ_TALLOW-285	GOETZ_TALLOW	GOETZ_TALLOWD2	GOETZ_TALLOWDDC	UDDS
GOETZ_TALLOW-286	GOETZ_TALLOW	GOETZ_TALLOWD2	GOETZ_TALLOWDDC	UDDS
GOETZ_TALLOW-287	GOETZ_TALLOW	GOETZ_TALLOWB20	GOETZ_TALLOWDDC	UDDS
GOETZ_TALLOW-288	GOETZ_TALLOW	GOETZ_TALLOWB20	GOETZ_TALLOWDDC	UDDS
GOETZ_TALLOW-289	GOETZ_TALLOW	GOETZ_TALLOWB20	GOETZ_TALLOWDDC	UDDS
GOETZ_TALLOW-290	GOETZ_TALLOW	GOETZ_TALLOWB20	GOETZ_TALLOWDDC	UDDS
932686-291	932686	932686-SF2	932686-A	R49
932686-292	932686	932686-SF2	932686-A	R49
932686-293	932686	932686-SF2	932686-A	R49
932686-294	932686	932686-SF2	932686-A	R49
932686-295	932686	932686-SF2	932686-A	R49
932686-296	932686	932686-SF2	932686-A	R49
932686-297	932686	932686-SF2	932686-A	R49
932686-298	932686	932686-SF2	932686-A	R49
932686-299	932686	932686-SF2	932686-A	R49
932686-300	932686	932686-SF2	932686-A	R49
932686-301	932686	932686-SF2	932686-A	R49
932686-302	932686	932686-SF2	932686-A	R49
932686-303	932686	932686-SF2	932686-A	R49
932686-304	932686	932686-SF2	932686-A	R49
932686-305	932686	932686-SF2	932686-A	R49
932686-306	932686	932686-SF2	932686-A	R49
932686-307	932686	932686-SF2	932686-A	R49
932686-308	932686	932686-SF2	932686-A	R49
932686-309	932686	932686-SF2	932686-A	R49
932686-310	932686	932686-SF2	932686-A	R49
932686-311	932686	932686-SF2	932686-A	R49
932686-312	932686	932686-SF2	932686-A	R49
932686-313	932686	932686-SF2	932686-A	R49
932686-314	932686	932686-SF2	932686-A	R49
932686-315	932686	932686-SF2	932686-A	R49
932686-316	932686	932686-SF2	932686-A	R49
932686-317	932686	932686-SF2	932686-A	R49

TEST_ID	STUDY_ID	FBATCH_ID	EQUIP_ID	EST_PRO
932686-318	932686	932686-SF2	932686-A	R49
932686-319	932686	932686-SF2	932686-A	R49
932686-320	932686	932686-SF2	932686-A	R49
932686-321	932686	932686-SF2	932686-A	R49
932686-322	932686	932686-SF2	932686-A	R49
932686-323	932686	932686-SF2	932686-A	R49
932686-324	932686	932686-SF2	932686-A	R49
932686-325	932686	932686-SF2	932686-A	R49
932686-326	932686	932686-SF2	932686-A	R49
932686-327	932686	932686-SF2	932686-A	R49
932686-328	932686	932686-SF2	932686-A	R49
932686-329	932686	932686-SF2	932686-A	R49
932686-330	932686	932686-SF2	932686-A	R49
932686-331	932686	932686-SF2	932686-A	R49
932686-332	932686	932686-SF2	932686-A	R49
932686-333	932686	932686-SF2	932686-A	R49
932686-334	932686	932686-SF2	932686-A	R49
932686-335	932686	932686-SF2	932686-A	R49
932686-336	932686	932686-SF2	932686-A	R49
932686-337	932686	932686-SF2	932686-A	R49
932686-338	932686	932686-SF2	932686-A	R49
932686-339	932686	932686-SF2	932686-A	R49
932686-340	932686	932686-RME	932686-A	R49
932686-341	932686	932686-RME	932686-A	R49
932686-342	932686	932686-RME	932686-A	R49
932686-343	932686	932686-RME	932686-A	R49
932686-344	932686	932686-RME	932686-A	R49
932686-345	932686	932686-RME	932686-A	R49
932686-346	932686	932686-RME	932686-A	R49
932686-347	932686	932686-RME	932686-A	R49
932686-348	932686	932686-RME	932686-A	R49
932686-349	932686	932686-RME	932686-A	R49
932686-350	932686	932686-RME	932686-A	R49
932686-351	932686	932686-RME	932686-A	R49
932686-352	932686	932686-RME	932686-A	R49
932686-353	932686	932686-SF2	932686-B	R49
932686-354	932686	932686-SF2	932686-B	R49
932686-355	932686	932686-SF2	932686-B	R49
932686-356	932686	932686-SF2	932686-B	R49
932686-357	932686	932686-30RME	932686-B	R49
932686-358	932686	932686-30RME	932686-B	R49
932686-359	932686	932686-RME	932686-B	R49
932686-360	932686	932686-RME	932686-B	R49
932686-361	932686	932686-SF2	932686-C	R49
932686-362	932686	932686-SF2	932686-C	R49
932686-363	932686	932686-SF2	932686-C	R49
932686-364	932686	932686-SF2	932686-C	R49
932686-365	932686	932686-RME	932686-C	R49
830377-366	830377	830377-REF	830377-A	STEADY-STATE

TEST_ID	STUDY_ID	FBATCH_ID	EQUIP_ID	EST_PRO
830377-367	830377	830377-SOY	830377-A	STEADY-STATE
830377-368	830377	830377-REF	830377-A	UDDS
830377-369	830377	830377-SOY	830377-A	UDDS
SIRMAN_98-370	SIRMAN_98	SIRMAN_98-LS	SIRMAN_98-DB	STEADY-STATE
SIRMAN_98-371	SIRMAN_98	SIRMAN_98-LS	SIRMAN_98-DB	STEADY-STATE
SIRMAN_98-372	SIRMAN_98	SIRMAN_98-LS	SIRMAN_98-DB	STEADY-STATE
SIRMAN_98-373	SIRMAN_98	SIRMAN_98-B20	SIRMAN_98-DB	STEADY-STATE
SIRMAN_98-374	SIRMAN_98	SIRMAN_98-B20	SIRMAN_98-DB	STEADY-STATE
SIRMAN_98-375	SIRMAN_98	SIRMAN_98-B20	SIRMAN_98-DB	STEADY-STATE
SHARP_94-92TA-376	SHARP_94-92TA	SHARP_94-92TA2D	SHARP_94-92TADDC	UDDS
SHARP_94-92TA-377	SHARP_94-92TA	SHARP_94-92TA2D	SHARP_94-92TADDC	UDDS
SHARP_94-92TA-378	SHARP_94-92TA	SHARP_94-92TA2D	SHARP_94-92TADDC	UDDS
SHARP_94-92TA-379	SHARP_94-92TA	SHARP_94-92TAB20	SHARP_94-92TADDC	UDDS
SHARP_94-92TA-380	SHARP_94-92TA	SHARP_94-92TAB20	SHARP_94-92TADDC	UDDS
SHARP_94-92TA-381	SHARP_94-92TA	SHARP_94-92TAB20	SHARP_94-92TADDC	UDDS
SHARP_94-92TA-382	SHARP_94-92TA	SHARP_94-92TA2D	SHARP_94-92TADDC	UDDSH
SHARP_94-92TA-383	SHARP_94-92TA	SHARP_94-92TA2D	SHARP_94-92TADDC	UDDSH
SHARP_94-92TA-384	SHARP_94-92TA	SHARP_94-92TA2D	SHARP_94-92TADDCWCAT	UDDS
SHARP_94-92TA-385	SHARP_94-92TA	SHARP_94-92TA2D	SHARP_94-92TADDCWCAT	UDDS
SHARP_94-92TA-386	SHARP_94-92TA	SHARP_94-92TA2D	SHARP_94-92TADDCWCAT	UDDS
SHARP_94-92TA-387	SHARP_94-92TA	SHARP_94-92TAB20	SHARP_94-92TADDCWCAT	UDDS
SHARP_94-92TA-388	SHARP_94-92TA	SHARP_94-92TAB20	SHARP_94-92TADDCWCAT	UDDS
SHARP_94-92TA-389	SHARP_94-92TA	SHARP_94-92TAB20	SHARP_94-92TADDCWCAT	UDDS
SHARP_94-60-390	SHARP_94-60	SHARP_94-60-R1	SHARP_94-60-A	UDDSH
SHARP_94-60-391	SHARP_94-60	SHARP_94-60-R1	SHARP_94-60-A	UDDSH
SHARP_94-60-392	SHARP_94-60	SHARP_94-60-R1	SHARP_94-60-A	UDDSH
SHARP_94-60-393	SHARP_94-60	SHARP_94-60-R1	SHARP_94-60-A	UDDSH
SHARP_94-60-394	SHARP_94-60	SHARP_94-60-R1	SHARP_94-60-A	UDDSH
SHARP_94-60-395	SHARP_94-60	SHARP_94-60-A	SHARP_94-60-A	UDDSH
SHARP_94-60-396	SHARP_94-60	SHARP_94-60-A	SHARP_94-60-A	UDDSH
SHARP_94-60-397	SHARP_94-60	SHARP_94-60-A	SHARP_94-60-A	UDDSH
SHARP_94-60-398	SHARP_94-60	SHARP_94-60-A	SHARP_94-60-A	UDDSH
SHARP_94-60-399	SHARP_94-60	SHARP_94-60-A	SHARP_94-60-A	UDDSH
SHARP_94-60-400	SHARP_94-60	SHARP_94-60-A	SHARP_94-60-A	UDDSH
SHARP_94-60-401	SHARP_94-60	SHARP_94-60-A	SHARP_94-60-A	UDDSH
SHARP_94-60-402	SHARP_94-60	SHARP_94-60-A	SHARP_94-60-A	UDDSH
SHARP_94-60-403	SHARP_94-60	SHARP_94-60-C	SHARP_94-60-A	UDDSH
SHARP_94-60-404	SHARP_94-60	SHARP_94-60-D	SHARP_94-60-A	UDDSH

TEST_ID	STUDY_ID	FBATCH_ID	EQUIP_ID	EST_PRO
SHARP_94-60-405	SHARP_94-60	SHARP_94-60-D	SHARP_94-60-A	UDDSH
SHARP_94-60-406	SHARP_94-60	SHARP_94-60-C	SHARP_94-60-A	UDDSH
SHARP_94-60-407	SHARP_94-60	SHARP_94-60-C	SHARP_94-60-A	UDDSH
SHARP_94-60-408	SHARP_94-60	SHARP_94-60-D	SHARP_94-60-A	UDDSH
SHARP_94-60-409	SHARP_94-60	SHARP_94-60-D	SHARP_94-60-A	UDDSH
SHARP_94-60-410	SHARP_94-60	SHARP_94-60-C	SHARP_94-60-A	UDDSH
SHARP_94-60-411	SHARP_94-60	SHARP_94-60-C	SHARP_94-60-A	UDDSH
SHARP_94-60-412	SHARP_94-60	SHARP_94-60-C	SHARP_94-60-A	UDDSH
PETERSON_99-413	PETERSON_99	PETERSON_99-2D	PETERSON_99-CECWCAT	UDDS
PETERSON_99-414	PETERSON_99	PETERSON_99-2D	PETERSON_99-CECWCAT	UDDS
PETERSON_99-415	PETERSON_99	PETERSON_99-2D	PETERSON_99-CECWCAT	UDDS
PETERSON_99-416	PETERSON_99	PETERSON_99-20REE	PETERSON_99-CECWCAT	UDDS
PETERSON_99-417	PETERSON_99	PETERSON_99-20REE	PETERSON_99-CECWCAT	UDDS
PETERSON_99-418	PETERSON_99	PETERSON_99-20REE	PETERSON_99-CECWCAT	UDDS
PETERSON_99-419	PETERSON_99	PETERSON_99-50REE	PETERSON_99-CECWCAT	UDDS
PETERSON_99-420	PETERSON_99	PETERSON_99-50REE	PETERSON_99-CECWCAT	UDDS
PETERSON_99-421	PETERSON_99	PETERSON_99-50REE	PETERSON_99-CECWCAT	UDDS
PETERSON_99-422	PETERSON_99	PETERSON_99-100REE	PETERSON_99-CECWCAT	UDDS
PETERSON_99-423	PETERSON_99	PETERSON_99-100REE	PETERSON_99-CECWCAT	UDDS
PETERSON_99-424	PETERSON_99	PETERSON_99-100REE	PETERSON_99-CECWCAT	UDDS
PETERSON_99-425	PETERSON_99	PETERSON_99-100REE	PETERSON_99-CECWCAT	UDDS
PETERSON_99-426	PETERSON_99	PETERSON_99-2D	PETERSON_99-CEC	UDDS
PETERSON_99-427	PETERSON_99	PETERSON_99-2D	PETERSON_99-CEC	UDDS
PETERSON_99-428	PETERSON_99	PETERSON_99-2D	PETERSON_99-CEC	UDDS
PETERSON_99-429	PETERSON_99	PETERSON_99-20REE	PETERSON_99-CEC	UDDS
PETERSON_99-430	PETERSON_99	PETERSON_99-20REE	PETERSON_99-CEC	UDDS
PETERSON_99-431	PETERSON_99	PETERSON_99-20REE	PETERSON_99-CEC	UDDS
PETERSON_99-432	PETERSON_99	PETERSON_99-50REE	PETERSON_99-CEC	UDDS
PETERSON_99-433	PETERSON_99	PETERSON_99-50REE	PETERSON_99-CEC	UDDS
PETERSON_99-434	PETERSON_99	PETERSON_99-100REE	PETERSON_99-CEC	UDDS
PETERSON_99-435	PETERSON_99	PETERSON_99-100REE	PETERSON_99-CEC	UDDS

TEST_ID	STUDY_ID	FBATCH_ID	EQUIP_ID	EST_PRO
PETERSON_99-436	PETERSON_99	PETERSON_99-100REE	PETERSON_99-CEC	UDDS
PETERSON_99-437	PETERSON_99	PETERSON_99-2D	PETERSON_99-CECWCAT	UDDS
PETERSON_99-438	PETERSON_99	PETERSON_99-2D	PETERSON_99-CECWCAT	UDDS
PETERSON_99-439	PETERSON_99	PETERSON_99-2D	PETERSON_99-CECWCAT	UDDS
PETERSON_99-440	PETERSON_99	PETERSON_99-20REE	PETERSON_99-CECWCAT	UDDS
PETERSON_99-441	PETERSON_99	PETERSON_99-20REE	PETERSON_99-CECWCAT	UDDS
PETERSON_99-442	PETERSON_99	PETERSON_99-20REE	PETERSON_99-CECWCAT	UDDS
PETERSON_99-443	PETERSON_99	PETERSON_99-50REE	PETERSON_99-CECWCAT	UDDS
PETERSON_99-444	PETERSON_99	PETERSON_99-50REE	PETERSON_99-CECWCAT	UDDS
PETERSON_99-445	PETERSON_99	PETERSON_99-50REE	PETERSON_99-CECWCAT	UDDS
PETERSON_99-446	PETERSON_99	PETERSON_99-100REE	PETERSON_99-CECWCAT	UDDS
PETERSON_99-447	PETERSON_99	PETERSON_99-100REE	PETERSON_99-CECWCAT	UDDS
PETERSON_99-448	PETERSON_99	PETERSON_99-100REE	PETERSON_99-CECWCAT	UDDS
PETERSON_99-449	PETERSON_99	PETERSON_99-100REE	PETERSON_99-CECWCAT	UDDS
PETERSON_99-450	PETERSON_99	PETERSON_99-2D	PETERSON_99-CEC	UDDS
PETERSON_99-451	PETERSON_99	PETERSON_99-2D	PETERSON_99-CEC	UDDS
PETERSON_99-452	PETERSON_99	PETERSON_99-2D	PETERSON_99-CEC	UDDS
PETERSON_99-453	PETERSON_99	PETERSON_99-2D	PETERSON_99-CEC	UDDS
PETERSON_99-454	PETERSON_99	PETERSON_99-20REE	PETERSON_99-CEC	UDDS
PETERSON_99-455	PETERSON_99	PETERSON_99-20REE	PETERSON_99-CEC	UDDS
PETERSON_99-456	PETERSON_99	PETERSON_99-20REE	PETERSON_99-CEC	UDDS
PETERSON_99-457	PETERSON_99	PETERSON_99-50REE	PETERSON_99-CEC	UDDS
PETERSON_99-458	PETERSON_99	PETERSON_99-50REE	PETERSON_99-CEC	UDDS
PETERSON_99-459	PETERSON_99	PETERSON_99-50REE	PETERSON_99-CEC	UDDS
PETERSON_99-460	PETERSON_99	PETERSON_99-100REE	PETERSON_99-CEC	UDDS
PETERSON_99-461	PETERSON_99	PETERSON_99-100REE	PETERSON_99-CEC	UDDS
PETERSON_99-462	PETERSON_99	PETERSON_99-100REE	PETERSON_99-CEC	UDDS
FOSSEEN_92TA-463	FOSSEEN_92TA	FOSSEEN_92TA2D	FOSSEEN_92TADDC	UDDS

TEST_ID	STUDY_ID	FBATCH_ID	EQUIP_ID	EST_PROD
FOSSEEN_92TA-464	FOSSEEN_92TA	FOSSEEN_92TA2D	FOSSEEN_92TADDC	UDDS
FOSSEEN_92TA-465	FOSSEEN_92TA	FOSSEEN_92TA2D	FOSSEEN_92TADDC	UDDS
FOSSEEN_92TA-466	FOSSEEN_92TA	FOSSEEN_92TA20/80	FOSSEEN_92TADDC	UDDS
FOSSEEN_92TA-467	FOSSEEN_92TA	FOSSEEN_92TA20/80	FOSSEEN_92TADDC	UDDS
FOSSEEN_92TA-468	FOSSEEN_92TA	FOSSEEN_92TA20/80	FOSSEEN_92TADDC	UDDS
FOSSEEN_92TA-469	FOSSEEN_92TA	FOSSEEN_92TA20/80	FOSSEEN_92TADDC	UDDS
FOSSEEN_92TA-470	FOSSEEN_92TA	FOSSEEN_92TA20/80	FOSSEEN_92TADDC	UDDS
FOSSEEN_92TA-471	FOSSEEN_92TA	FOSSEEN_92TA20/80	FOSSEEN_92TADDC	UDDS
FOSSEEN_92TA-472	FOSSEEN_92TA	FOSSEEN_92TA20/80	FOSSEEN_92TADDC	UDDS
FOSSEEN_92TA-473	FOSSEEN_92TA	FOSSEEN_92TA20/80	FOSSEEN_92TADDC	UDDS
FOSSEEN_92TA-474	FOSSEEN_92TA	FOSSEEN_92TA20/80	FOSSEEN_92TADDC	UDDS
FOSSEEN_92TA-475	FOSSEEN_92TA	FOSSEEN_92TA20/80	FOSSEEN_92TADDC	UDDS
FOSSEEN_92TA-476	FOSSEEN_92TA	FOSSEEN_92TA20/80	FOSSEEN_92TADDC	UDDS
FOSSEEN_92TA-477	FOSSEEN_92TA	FOSSEEN_92TA20/80	FOSSEEN_92TADDC	UDDS
FOSSEEN_92TA-478	FOSSEEN_92TA	FOSSEEN_92TA30/70	FOSSEEN_92TADDC	UDDS
FOSSEEN_92TA-479	FOSSEEN_92TA	FOSSEEN_92TA30/70	FOSSEEN_92TADDC	UDDS
FOSSEEN_92TA-480	FOSSEEN_92TA	FOSSEEN_92TA30/70	FOSSEEN_92TADDC	UDDS
FOSSEEN_92TA-481	FOSSEEN_92TA	FOSSEEN_92TA30/70	FOSSEEN_92TADDC	UDDS
FOSSEEN_92TA-482	FOSSEEN_92TA	FOSSEEN_92TA2D	FOSSEEN_92TADDC1 486	UDDS
FOSSEEN_92TA-483	FOSSEEN_92TA	FOSSEEN_92TA2D	FOSSEEN_92TADDC1 486	UDDS
FOSSEEN_92TA-484	FOSSEEN_92TA	FOSSEEN_92TA2D	FOSSEEN_92TADDC1 486	UDDS
FOSSEEN_92TA-485	FOSSEEN_92TA	FOSSEEN_92TA20/80	FOSSEEN_92TADDC1 486	UDDS
FOSSEEN_92TA-486	FOSSEEN_92TA	FOSSEEN_92TA20/80	FOSSEEN_92TADDC1 486	UDDS
FOSSEEN_92TA-487	FOSSEEN_92TA	FOSSEEN_92TA20/80	FOSSEEN_92TADDC1 486	UDDS
FOSSEEN_92TA-488	FOSSEEN_92TA	FOSSEEN_92TA2D	FOSSEEN_92TADDC1 496	UDDS
FOSSEEN_92TA-489	FOSSEEN_92TA	FOSSEEN_92TA20/80	FOSSEEN_92TADDC1 496	UDDS

TEST_ID	STUDY_ID	F BATCH_ID	EQUIP_ID	EST_PRO
FOSSEEN_92TA-490	FOSSEEN_92TA	FOSSEEN_92TA20/80	FOSSEEN_92TADDC1 496	UDDS
FOSSEEN_92TA-491	FOSSEEN_92TA	FOSSEEN_92TA20/80	FOSSEEN_92TADDC1 496	UDDS
CALLAHAN_93-492	CALLAHAN_93	CALLAHAN_93-2D	CALLAHAN_93T0	STEADY- STATE
CALLAHAN_93-493	CALLAHAN_93	CALLAHAN_93-2D	CALLAHAN_93T0	STEADY- STATE
CALLAHAN_93-494	CALLAHAN_93	CALLAHAN_93-2D	CALLAHAN_93T0	STEADY- STATE
CALLAHAN_93-495	CALLAHAN_93	CALLAHAN_93-10	CALLAHAN_93T0	STEADY- STATE
CALLAHAN_93-496	CALLAHAN_93	CALLAHAN_93-20	CALLAHAN_93T0	STEADY- STATE
CALLAHAN_93-497	CALLAHAN_93	CALLAHAN_93-20	CALLAHAN_93T0	STEADY- STATE
CALLAHAN_93-498	CALLAHAN_93	CALLAHAN_93-30	CALLAHAN_93T0	STEADY- STATE
CALLAHAN_93-499	CALLAHAN_93	CALLAHAN_93-50	CALLAHAN_93T0	STEADY- STATE
CALLAHAN_93-500	CALLAHAN_93	CALLAHAN_93-100	CALLAHAN_93T0	STEADY- STATE
CALLAHAN_93-501	CALLAHAN_93	CALLAHAN_93-2D	CALLAHAN_93T3	STEADY- STATE
CALLAHAN_93-502	CALLAHAN_93	CALLAHAN_93-2D	CALLAHAN_93T3	STEADY- STATE
CALLAHAN_93-503	CALLAHAN_93	CALLAHAN_93-10	CALLAHAN_93T3	STEADY- STATE
CALLAHAN_93-504	CALLAHAN_93	CALLAHAN_93-20	CALLAHAN_93T3	STEADY- STATE
CALLAHAN_93-505	CALLAHAN_93	CALLAHAN_93-30	CALLAHAN_93T3	STEADY- STATE
CALLAHAN_93-506	CALLAHAN_93	CALLAHAN_93-PHIL	CALLAHAN_93-D60	UDDSH
CALLAHAN_93-507	CALLAHAN_93	CALLAHAN_93-PHIL	CALLAHAN_93-D60	UDDSH
CALLAHAN_93-508	CALLAHAN_93	CALLAHAN_93-PHIL	CALLAHAN_93-D60	UDDSH
CALLAHAN_93-509	CALLAHAN_93	CALLAHAN_93- PHIL10	CALLAHAN_93-D60	UDDSH
CALLAHAN_93-510	CALLAHAN_93	CALLAHAN_93- PHIL10	CALLAHAN_93-D60	UDDSH
CALLAHAN_93-511	CALLAHAN_93	CALLAHAN_93- PHIL10	CALLAHAN_93-D60	UDDSH
CALLAHAN_93-512	CALLAHAN_93	CALLAHAN_93- PHIL20	CALLAHAN_93-D60	UDDSH
CALLAHAN_93-513	CALLAHAN_93	CALLAHAN_93- PHIL20	CALLAHAN_93-D60	UDDSH
CALLAHAN_93-514	CALLAHAN_93	CALLAHAN_93- PHIL20	CALLAHAN_93-D60	UDDSH
CALLAHAN_93-515	CALLAHAN_93	CALLAHAN_93-PHIL	CALLAHAN_93-6V	UDDS
CALLAHAN_93-516	CALLAHAN_93	CALLAHAN_93-PHIL	CALLAHAN_93-6V	UDDS
CALLAHAN_93-517	CALLAHAN_93	CALLAHAN_93-PHIL	CALLAHAN_93-6V	UDDS

TEST_ID	STUDY_ID	FBATCH_ID	EQUIP_ID	EST_PROG
CALLAHAN_93-518	CALLAHAN_93	CALLAHAN_93-PHIL10	CALLAHAN_93-6V	UDDS
CALLAHAN_93-519	CALLAHAN_93	CALLAHAN_93-PHIL10	CALLAHAN_93-6V	UDDS
CALLAHAN_93-520	CALLAHAN_93	CALLAHAN_93-PHIL10	CALLAHAN_93-6V	UDDS
CALLAHAN_93-521	CALLAHAN_93	CALLAHAN_93-PHIL20	CALLAHAN_93-6V	UDDS
CALLAHAN_93-522	CALLAHAN_93	CALLAHAN_93-PHIL20	CALLAHAN_93-6V	UDDS
CALLAHAN_93-523	CALLAHAN_93	CALLAHAN_93-PHIL20	CALLAHAN_93-6V	UDDS
CALLAHAN_93-524	CALLAHAN_93	CALLAHAN_93-PHIL20	CALLAHAN_93-6VMOD	UDDS
CALLAHAN_93-525	CALLAHAN_93	CALLAHAN_93-PHIL20	CALLAHAN_93-6VMOD	UDDS
CALLAHAN_93-526	CALLAHAN_93	CALLAHAN_93-PHIL20	CALLAHAN_93-6VMOD	UDDS
CALLAHAN_93-527	CALLAHAN_93	CALLAHAN_93-PHIL30	CALLAHAN_93-6VMOD	UDDS
CALLAHAN_93-528	CALLAHAN_93	CALLAHAN_93-PHIL30	CALLAHAN_93-6VMOD	UDDS
CALLAHAN_93-529	CALLAHAN_93	CALLAHAN_93-PHIL30	CALLAHAN_93-6VMOD	UDDS
CALLAHAN_93-530	CALLAHAN_93	CALLAHAN_93-PHIL	CALLAHAN_93-6VMOD	UDDS
CALLAHAN_93-531	CALLAHAN_93	CALLAHAN_93-PHIL	CALLAHAN_93-6VMOD	UDDS
CALLAHAN_93-532	CALLAHAN_93	CALLAHAN_93-PHIL	CALLAHAN_93-6VMOD	UDDS
GRABOSKI_00-533	GRABOSKI_00	GRABOSKI_00-CERT1	GRABOSKI_00-A	UDDSH
GRABOSKI_00-534	GRABOSKI_00	GRABOSKI_00-CERT1	GRABOSKI_00-A	UDDSH
GRABOSKI_00-535	GRABOSKI_00	GRABOSKI_00-CERT1	GRABOSKI_00-A	UDDSH
GRABOSKI_00-536	GRABOSKI_00	GRABOSKI_00-20M80	GRABOSKI_00-A	UDDSH
GRABOSKI_00-537	GRABOSKI_00	GRABOSKI_00-20M80	GRABOSKI_00-A	UDDSH
GRABOSKI_00-538	GRABOSKI_00	GRABOSKI_00-20M80	GRABOSKI_00-A	UDDSH
GRABOSKI_00-539	GRABOSKI_00	GRABOSKI_00-CERT1	GRABOSKI_00-A	UDDSH
GRABOSKI_00-540	GRABOSKI_00	GRABOSKI_00-CERT1	GRABOSKI_00-A	UDDSH
GRABOSKI_00-541	GRABOSKI_00	GRABOSKI_00-20L80	GRABOSKI_00-A	UDDSH
GRABOSKI_00-542	GRABOSKI_00	GRABOSKI_00-20L80	GRABOSKI_00-A	UDDSH
GRABOSKI_00-543	GRABOSKI_00	GRABOSKI_00-20L80	GRABOSKI_00-A	UDDSH
GRABOSKI_00-544	GRABOSKI_00	GRABOSKI_00-CERT1	GRABOSKI_00-A	UDDSH

TEST_ID	STUDY_ID	F BATCH_ID	EQUIP_ID	EST_PRO
GRABOSKI_00-545	GRABOSKI_00	GRABOSKI_00-CERT1	GRABOSKI_00-A	UDDSH
GRABOSKI_00-546	GRABOSKI_00	GRABOSKI_00-CERT1	GRABOSKI_00-A	UDDSH
GRABOSKI_00-547	GRABOSKI_00	GRABOSKI_00-CERT1	GRABOSKI_00-A	UDDSH
GRABOSKI_00-548	GRABOSKI_00	GRABOSKI_00-CERT1	GRABOSKI_00-A	UDDSH
GRABOSKI_00-549	GRABOSKI_00	GRABOSKI_00-CERT1	GRABOSKI_00-A	UDDSH
GRABOSKI_00-550	GRABOSKI_00	GRABOSKI_00-CERT1	GRABOSKI_00-A	UDDSH
GRABOSKI_00-551	GRABOSKI_00	GRABOSKI_00-CERT1	GRABOSKI_00-A	UDDSH
GRABOSKI_00-552	GRABOSKI_00	GRABOSKI_00-CERT1	GRABOSKI_00-A	UDDSH
GRABOSKI_00-553	GRABOSKI_00	GRABOSKI_00-CERT1	GRABOSKI_00-A	UDDSH
GRABOSKI_00-554	GRABOSKI_00	GRABOSKI_00-CERT1	GRABOSKI_00-A	UDDSH
GRABOSKI_00-555	GRABOSKI_00	GRABOSKI_00-20IT80	GRABOSKI_00-A	UDDSH
GRABOSKI_00-556	GRABOSKI_00	GRABOSKI_00-20IT80	GRABOSKI_00-A	UDDSH
GRABOSKI_00-557	GRABOSKI_00	GRABOSKI_00-20IT80	GRABOSKI_00-A	UDDSH
GRABOSKI_00-558	GRABOSKI_00	GRABOSKI_00-CERT1	GRABOSKI_00-A	UDDSH
GRABOSKI_00-559	GRABOSKI_00	GRABOSKI_00-CERT1	GRABOSKI_00-A	UDDSH
GRABOSKI_00-560	GRABOSKI_00	GRABOSKI_00-CERT1	GRABOSKI_00-A	UDDSH
GRABOSKI_00-561	GRABOSKI_00	GRABOSKI_00-CERT2	GRABOSKI_00-A	UDDSH
GRABOSKI_00-562	GRABOSKI_00	GRABOSKI_00-CERT2	GRABOSKI_00-A	UDDSH
GRABOSKI_00-563	GRABOSKI_00	GRABOSKI_00-CERT2	GRABOSKI_00-A	UDDSH
GRABOSKI_00-564	GRABOSKI_00	GRABOSKI_00-SOY	GRABOSKI_00-A	UDDSH
GRABOSKI_00-565	GRABOSKI_00	GRABOSKI_00-SOY	GRABOSKI_00-A	UDDSH
GRABOSKI_00-566	GRABOSKI_00	GRABOSKI_00-SOY	GRABOSKI_00-A	UDDSH
GRABOSKI_00-567	GRABOSKI_00	GRABOSKI_00-CERT2	GRABOSKI_00-A	UDDSH
GRABOSKI_00-568	GRABOSKI_00	GRABOSKI_00-CERT2	GRABOSKI_00-A	UDDSH
GRABOSKI_00-569	GRABOSKI_00	GRABOSKI_00-CERT2	GRABOSKI_00-A	UDDSH
GRABOSKI_00-570	GRABOSKI_00	GRABOSKI_00-CANOLA	GRABOSKI_00-A	UDDSH
GRABOSKI_00-571	GRABOSKI_00	GRABOSKI_00-CANOLA	GRABOSKI_00-A	UDDSH

TEST_ID	STUDY_ID	FBATCH_ID	EQUIP_ID	EST_PRO
GRABOSKI_00-572	GRABOSKI_00	GRABOSKI_00-CANOLA	GRABOSKI_00-A	UDDSH
GRABOSKI_00-573	GRABOSKI_00	GRABOSKI_00-CERT2	GRABOSKI_00-A	UDDSH
GRABOSKI_00-574	GRABOSKI_00	GRABOSKI_00-CERT2	GRABOSKI_00-A	UDDSH
GRABOSKI_00-575	GRABOSKI_00	GRABOSKI_00-LARD	GRABOSKI_00-A	UDDSH
GRABOSKI_00-576	GRABOSKI_00	GRABOSKI_00-LARD	GRABOSKI_00-A	UDDSH
GRABOSKI_00-577	GRABOSKI_00	GRABOSKI_00-LARD	GRABOSKI_00-A	UDDSH
GRABOSKI_00-578	GRABOSKI_00	GRABOSKI_00-CERT2	GRABOSKI_00-A	UDDSH
GRABOSKI_00-579	GRABOSKI_00	GRABOSKI_00-CERT2	GRABOSKI_00-A	UDDSH
GRABOSKI_00-580	GRABOSKI_00	GRABOSKI_00-CERT2	GRABOSKI_00-A	UDDSH
GRABOSKI_00-581	GRABOSKI_00	GRABOSKI_00-CERT2	GRABOSKI_00-A	UDDSH
GRABOSKI_00-582	GRABOSKI_00	GRABOSKI_00-CERT2	GRABOSKI_00-A	UDDSH
GRABOSKI_00-583	GRABOSKI_00	GRABOSKI_00-CERT2	GRABOSKI_00-A	UDDSH
GRABOSKI_00-584	GRABOSKI_00	GRABOSKI_00-CERT2	GRABOSKI_00-A	UDDSH
GRABOSKI_00-585	GRABOSKI_00	GRABOSKI_00-CERT2	GRABOSKI_00-A	UDDSH
GRABOSKI_00-586	GRABOSKI_00	GRABOSKI_00-CERT2	GRABOSKI_00-A	UDDSH
GRABOSKI_00-587	GRABOSKI_00	GRABOSKI_00-ITALLOW	GRABOSKI_00-A	UDDSH
GRABOSKI_00-588	GRABOSKI_00	GRABOSKI_00-ITALLOW	GRABOSKI_00-A	UDDSH
GRABOSKI_00-589	GRABOSKI_00	GRABOSKI_00-ITALLOW	GRABOSKI_00-A	UDDSH
GRABOSKI_00-590	GRABOSKI_00	GRABOSKI_00-CERT2	GRABOSKI_00-A	UDDSH
GRABOSKI_00-591	GRABOSKI_00	GRABOSKI_00-CERT2	GRABOSKI_00-A	UDDSH
GRABOSKI_00-592	GRABOSKI_00	GRABOSKI_00-CERT2	GRABOSKI_00-A	UDDSH
GRABOSKI_00-593	GRABOSKI_00	GRABOSKI_00-TALLOW	GRABOSKI_00-A	UDDSH
GRABOSKI_00-594	GRABOSKI_00	GRABOSKI_00-TALLOW	GRABOSKI_00-A	UDDSH
GRABOSKI_00-595	GRABOSKI_00	GRABOSKI_00-TALLOW	GRABOSKI_00-A	UDDSH
GRABOSKI_00-596	GRABOSKI_00	GRABOSKI_00-CERT2	GRABOSKI_00-A	UDDSH
GRABOSKI_00-597	GRABOSKI_00	GRABOSKI_00-CERT2	GRABOSKI_00-A	UDDSH
GRABOSKI_00-598	GRABOSKI_00	GRABOSKI_00-CERT2	GRABOSKI_00-A	UDDSH

TEST_ID	STUDY_ID	F BATCH_ID	EQUIP_ID	EST_PRO
GRABOSKI_00-599	GRABOSKI_00	GRABOSKI_00-CERT2	GRABOSKI_00-A	UDDSH
GRABOSKI_00-600	GRABOSKI_00	GRABOSKI_00-CERT2	GRABOSKI_00-A	UDDSH
GRABOSKI_00-601	GRABOSKI_00	GRABOSKI_00-CERT2	GRABOSKI_00-A	UDDSH
GRABOSKI_00-602	GRABOSKI_00	GRABOSKI_00-LFFA	GRABOSKI_00-A	UDDSH
GRABOSKI_00-603	GRABOSKI_00	GRABOSKI_00-LFFA	GRABOSKI_00-A	UDDSH
GRABOSKI_00-604	GRABOSKI_00	GRABOSKI_00-LFFA	GRABOSKI_00-A	UDDSH
GRABOSKI_00-605	GRABOSKI_00	GRABOSKI_00-CERT2	GRABOSKI_00-A	UDDSH
GRABOSKI_00-606	GRABOSKI_00	GRABOSKI_00-CERT2	GRABOSKI_00-A	UDDSH
GRABOSKI_00-607	GRABOSKI_00	GRABOSKI_00-CERT2	GRABOSKI_00-A	UDDSH
GRABOSKI_00-608	GRABOSKI_00	GRABOSKI_00-CERT2	GRABOSKI_00-A	UDDSH
GRABOSKI_00-609	GRABOSKI_00	GRABOSKI_00-HFFA1	GRABOSKI_00-A	UDDSH
GRABOSKI_00-610	GRABOSKI_00	GRABOSKI_00-HFFA1	GRABOSKI_00-A	UDDSH
GRABOSKI_00-611	GRABOSKI_00	GRABOSKI_00-HFFA1	GRABOSKI_00-A	UDDSH
GRABOSKI_00-612	GRABOSKI_00	GRABOSKI_00-CERT3	GRABOSKI_00-A	UDDSH
GRABOSKI_00-613	GRABOSKI_00	GRABOSKI_00-CERT3	GRABOSKI_00-A	UDDSH
GRABOSKI_00-614	GRABOSKI_00	GRABOSKI_00-CERT3	GRABOSKI_00-A	UDDSH
GRABOSKI_00-615	GRABOSKI_00	GRABOSKI_00-CERT3	GRABOSKI_00-A	UDDSH
GRABOSKI_00-616	GRABOSKI_00	GRABOSKI_00-CERT3	GRABOSKI_00-A	UDDSH
GRABOSKI_00-617	GRABOSKI_00	GRABOSKI_00-CERT3	GRABOSKI_00-A	UDDSH
GRABOSKI_00-618	GRABOSKI_00	GRABOSKI_00-CERT3	GRABOSKI_00-A	UDDSH
GRABOSKI_00-619	GRABOSKI_00	GRABOSKI_00-CERT3	GRABOSKI_00-A	UDDSH
GRABOSKI_00-620	GRABOSKI_00	GRABOSKI_00-CERT3	GRABOSKI_00-A	UDDSH
GRABOSKI_00-621	GRABOSKI_00	GRABOSKI_00-CERT4	GRABOSKI_00-A	UDDSH
GRABOSKI_00-622	GRABOSKI_00	GRABOSKI_00-CERT4	GRABOSKI_00-A	UDDSH
GRABOSKI_00-623	GRABOSKI_00	GRABOSKI_00-CERT4	GRABOSKI_00-A	UDDSH
GRABOSKI_00-624	GRABOSKI_00	GRABOSKI_00-HFFA2	GRABOSKI_00-A	UDDSH
GRABOSKI_00-625	GRABOSKI_00	GRABOSKI_00-HFFA2	GRABOSKI_00-A	UDDSH

TEST_ID	STUDY_ID	F BATCH_ID	EQUIP_ID	EST_PROD
GRABOSKI_00-626	GRABOSKI_00	GRABOSKI_00-HFFA2	GRABOSKI_00-A	UDDSH
GRABOSKI_00-627	GRABOSKI_00	GRABOSKI_00-HFFA2	GRABOSKI_00-A	UDDSH
SMITH_98-630	SMITH_98	SMITH_98-SME	SMITH_98-A	UDDSH
SMITH_98-631	SMITH_98	SMITH_98-SME	SMITH_98-A	UDDSH
SMITH_98-632	SMITH_98	SMITH_98-SME	SMITH_98-A	UDDSH
SMITH_98-633	SMITH_98	SMITH_98-SME	SMITH_98-A	UDDSH
SMITH_98-634	SMITH_98	SMITH_98-SME	SMITH_98-A	UDDSH
SMITH_98-635	SMITH_98	SMITH_98-SME	SMITH_98-A	UDDSH
SMITH_98-636	SMITH_98	SMITH_98-SME	SMITH_98-A	UDDSH
SMITH_98-637	SMITH_98	SMITH_98-SME	SMITH_98-A	UDDSH
SMITH_98-638	SMITH_98	SMITH_98-SME	SMITH_98-A	UDDSH
SMITH_98-639	SMITH_98	SMITH_98-SME	SMITH_98-A	UDDSH
SMITH_98-640	SMITH_98	SMITH_98-SME	SMITH_98-A	UDDSH
SMITH_98-641	SMITH_98	SMITH_98-SME	SMITH_98-A	UDDSH
SMITH_98-642	SMITH_98	SMITH_98-SME	SMITH_98-A	UDDSH
SMITH_98-643	SMITH_98	SMITH_98-SME	SMITH_98-A	UDDSH
SMITH_98-644	SMITH_98	SMITH_98-SME	SMITH_98-A	UDDSH
SMITH_98-645	SMITH_98	SMITH_98-SME	SMITH_98-A	UDDSH
SMITH_98-646	SMITH_98	SMITH_98-SME	SMITH_98-A	UDDSH
SMITH_98-647	SMITH_98	SMITH_98-SME	SMITH_98-A	UDDSH
SMITH_98-648	SMITH_98	SMITH_98-SME	SMITH_98-A	UDDSH
SMITH_98-649	SMITH_98	SMITH_98-SME	SMITH_98-A	UDDSH
SMITH_98-650	SMITH_98	SMITH_98-SME	SMITH_98-A	UDDSH
SMITH_98-651	SMITH_98	SMITH_98-SME	SMITH_98-A	UDDSH
SMITH_98-652	SMITH_98	SMITH_98-SME	SMITH_98-A	UDDSH
SMITH_98-653	SMITH_98	SMITH_98-SME	SMITH_98-A	UDDSH
SMITH_98-654	SMITH_98	SMITH_98-SME	SMITH_98-A	UDDSH
SMITH_98-655	SMITH_98	SMITH_98-SME	SMITH_98-A	UDDSH
SMITH_98-656	SMITH_98	SMITH_98-SME	SMITH_98-A	UDDSH
SMITH_98-657	SMITH_98	SMITH_98-SME	SMITH_98-A	UDDSH
SMITH_98-658	SMITH_98	SMITH_98-SME	SMITH_98-A	UDDSH
SMITH_98-659	SMITH_98	SMITH_98-SME	SMITH_98-A	UDDSH
SMITH_98-660	SMITH_98	SMITH_98-SME	SMITH_98-A	UDDSH
SMITH_98-661	SMITH_98	SMITH_98-SME	SMITH_98-A	UDDSH
SMITH_98-662	SMITH_98	SMITH_98-SME	SMITH_98-A	UDDSH
SMITH_98-663	SMITH_98	SMITH_98-SME	SMITH_98-A	UDDSH
SMITH_98-664	SMITH_98	SMITH_98-SME	SMITH_98-A	UDDSH
SMITH_98-665	SMITH_98	SMITH_98-SME	SMITH_98-A	UDDSH
SMITH_98-666	SMITH_98	SMITH_98-SME	SMITH_98-A	UDDSH
SMITH_98-667	SMITH_98	SMITH_98-SME	SMITH_98-A	UDDSH
SMITH_98-668	SMITH_98	SMITH_98-SME	SMITH_98-A	UDDSH
SMITH_98-669	SMITH_98	SMITH_98-SME	SMITH_98-A	UDDSH
SMITH_98-670	SMITH_98	SMITH_98-SME	SMITH_98-A	UDDSH
SMITH_98-671	SMITH_98	SMITH_98-SME	SMITH_98-A	UDDSH
SMITH_98-672	SMITH_98	SMITH_98-SME	SMITH_98-A	UDDS
SMITH_98-673	SMITH_98	SMITH_98-SME	SMITH_98-A	UDDS
SMITH_98-674	SMITH_98	SMITH_98-SME	SMITH_98-A	UDDS
SMITH_98-675	SMITH_98	SMITH_98-SME	SMITH_98-A	UDDS
SMITH_98-676	SMITH_98	SMITH_98-SME	SMITH_98-A	UDDS

TEST ID	STUDY ID	FBATCH ID	EQUIP ID	EST_PRO
MCCORMICK_01-779	MCCORMICK_01	MCCORMICK_01-SOY	MCCORMICK_01-A	UDDSH
MCCORMICK_01-780	MCCORMICK_01	MCCORMICK_01-SOY	MCCORMICK_01-A	UDDSH
MCCORMICK_01-781	MCCORMICK_01	MCCORMICK_01-SOY	MCCORMICK_01-A	UDDSH
MCCORMICK_01-782	MCCORMICK_01	MCCORMICK_01-BIOC	MCCORMICK_01-A	UDDSH
MCCORMICK_01-783	MCCORMICK_01	MCCORMICK_01-BIOC	MCCORMICK_01-A	UDDSH
MCCORMICK_01-784	MCCORMICK_01	MCCORMICK_01-BIOC	MCCORMICK_01-A	UDDSH
MCCORMICK_01-785	MCCORMICK_01	MCCORMICK_01-SOY	MCCORMICK_01-A	UDDSH
MCCORMICK_01-786	MCCORMICK_01	MCCORMICK_01-SOY	MCCORMICK_01-A	UDDSH
MCCORMICK_01-787	MCCORMICK_01	MCCORMICK_01-SOY	MCCORMICK_01-A	UDDSH
MCCORMICK_01-788	MCCORMICK_01	MCCORMICK_01-BIO1	MCCORMICK_01-A	UDDSH
MCCORMICK_01-789	MCCORMICK_01	MCCORMICK_01-BIO1	MCCORMICK_01-A	UDDSH
MCCORMICK_01-790	MCCORMICK_01	MCCORMICK_01-BIO1	MCCORMICK_01-A	UDDSH
MCCORMICK_01-791	MCCORMICK_01	MCCORMICK_01-SOY	MCCORMICK_01-A	UDDSH
MCCORMICK_01-792	MCCORMICK_01	MCCORMICK_01-SOY	MCCORMICK_01-A	UDDSH
MCCORMICK_01-793	MCCORMICK_01	MCCORMICK_01-SOY	MCCORMICK_01-A	UDDSH
MCCORMICK_01-794	MCCORMICK_01	MCCORMICK_01-NO1	MCCORMICK_01-A	UDDSH
MCCORMICK_01-795	MCCORMICK_01	MCCORMICK_01-NO1	MCCORMICK_01-A	UDDSH
MCCORMICK_01-796	MCCORMICK_01	MCCORMICK_01-NO1	MCCORMICK_01-A	UDDSH
MCCORMICK_01-797	MCCORMICK_01	MCCORMICK_01-NO1	MCCORMICK_01-A	UDDSH
MCCORMICK_01-798	MCCORMICK_01	MCCORMICK_01-K50	MCCORMICK_01-A	UDDSH
MCCORMICK_01-799	MCCORMICK_01	MCCORMICK_01-K50	MCCORMICK_01-A	UDDSH
MCCORMICK_01-800	MCCORMICK_01	MCCORMICK_01-K50	MCCORMICK_01-A	UDDSH
MCCORMICK_01-801	MCCORMICK_01	MCCORMICK_01-SOY	MCCORMICK_01-A	UDDSH
MCCORMICK_01-802	MCCORMICK_01	MCCORMICK_01-SOY	MCCORMICK_01-A	UDDSH
MCCORMICK_01-803	MCCORMICK_01	MCCORMICK_01-SOY	MCCORMICK_01-A	UDDSH
MCCORMICK_01-804	MCCORMICK_01	MCCORMICK_01-SOY	MCCORMICK_01-A	UDDSH
MCCORMICK_01-805	MCCORMICK_01	MCCORMICK_01-SOY	MCCORMICK_01-A	UDDSH
MCCORMICK_01-806	MCCORMICK_01	MCCORMICK_01-SOY	MCCORMICK_01-A	UDDSH
DURBIN_99-844	DURBIN_99	DURBIN_99-RFD	DURBIN_99-RAM2500	UDDS
DURBIN_99-845	DURBIN_99	DURBIN_99-RFD	DURBIN_99-RAM2500	UDDS
DURBIN_99-846	DURBIN_99	DURBIN_99-RFD	DURBIN_99-RAM2500	UDDS
DURBIN_99-847	DURBIN_99	DURBIN_99-RFD	DURBIN_99-RAM2500	UDDS
DURBIN_99-848	DURBIN_99	DURBIN_99-BLEND	DURBIN_99-RAM2500	UDDS
DURBIN_99-849	DURBIN_99	DURBIN_99-BLEND	DURBIN_99-RAM2500	UDDS
DURBIN_99-850	DURBIN_99	DURBIN_99-BIODIESE	DURBIN_99-RAM2500	UDDS
DURBIN_99-851	DURBIN_99	DURBIN_99-BIODIESE	DURBIN_99-RAM2500	UDDS
DURBIN_99-852	DURBIN_99	DURBIN_99-RFD	DURBIN_99-F350	UDDS
DURBIN_99-853	DURBIN_99	DURBIN_99-RFD	DURBIN_99-F350	UDDS
DURBIN_99-854	DURBIN_99	DURBIN_99-RFD	DURBIN_99-F350	UDDS
DURBIN_99-855	DURBIN_99	DURBIN_99-RFD	DURBIN_99-F350	UDDS
DURBIN_99-856	DURBIN_99	DURBIN_99-BLEND	DURBIN_99-F350	UDDS
DURBIN_99-857	DURBIN_99	DURBIN_99-BLEND	DURBIN_99-F350	UDDS
DURBIN_99-858	DURBIN_99	DURBIN_99-BLEND	DURBIN_99-F350	UDDS
DURBIN_99-859	DURBIN_99	DURBIN_99-BLEND	DURBIN_99-F350	UDDS
DURBIN_99-860	DURBIN_99	DURBIN_99-BIODIESE	DURBIN_99-F350	UDDS
DURBIN_99-861	DURBIN_99	DURBIN_99-BIODIESE	DURBIN_99-F350	UDDS
DURBIN_99-862	DURBIN_99	DURBIN_99-BIODIESE	DURBIN_99-F350	UDDS
DURBIN_99-863	DURBIN_99	DURBIN_99-BIODIESE	DURBIN_99-F350	UDDS
DURBIN_99-864	DURBIN_99	DURBIN_99-RFD	DURBIN_99-RAM250	UDDS
DURBIN_99-865	DURBIN_99	DURBIN_99-RFD	DURBIN_99-RAM250	UDDS
DURBIN_99-866	DURBIN_99	DURBIN_99-RFD	DURBIN_99-RAM250	UDDS

TEST_ID	STUDY_ID	FBATCH_ID	EQUIP_ID	EST_PROD
DURBIN_99-867	DURBIN_99	DURBIN_99-RFD	DURBIN_99-RAM250	UDDS
DURBIN_99-868	DURBIN_99	DURBIN_99-BLEND	DURBIN_99-RAM250	UDDS
DURBIN_99-869	DURBIN_99	DURBIN_99-BLEND	DURBIN_99-RAM250	UDDS
DURBIN_99-870	DURBIN_99	DURBIN_99-BLEND	DURBIN_99-RAM250	UDDS
DURBIN_99-871	DURBIN_99	DURBIN_99-BLEND	DURBIN_99-RAM250	UDDS
DURBIN_99-872	DURBIN_99	DURBIN_99-BIODIESE	DURBIN_99-RAM250	UDDS
DURBIN_99-873	DURBIN_99	DURBIN_99-BIODIESE	DURBIN_99-RAM250	UDDS
DURBIN_99-874	DURBIN_99	DURBIN_99-BIODIESE	DURBIN_99-RAM250	UDDS
DURBIN_99-875	DURBIN_99	DURBIN_99-BIODIESE	DURBIN_99-RAM250	UDDS
DURBIN_99-876	DURBIN_99	DURBIN_99-RFD	DURBIN_99-F250	UDDS
DURBIN_99-877	DURBIN_99	DURBIN_99-RFD	DURBIN_99-F250	UDDS
DURBIN_99-878	DURBIN_99	DURBIN_99-RFD	DURBIN_99-F250	UDDS
DURBIN_99-879	DURBIN_99	DURBIN_99-BLEND	DURBIN_99-F250	UDDS
DURBIN_99-880	DURBIN_99	DURBIN_99-BLEND	DURBIN_99-F250	UDDS
DURBIN_99-881	DURBIN_99	DURBIN_99-BLEND	DURBIN_99-F250	UDDS
DURBIN_99-882	DURBIN_99	DURBIN_99-BIODIESE	DURBIN_99-F250	UDDS
DURBIN_99-883	DURBIN_99	DURBIN_99-BIODIESE	DURBIN_99-F250	UDDS
DURBIN_99-884	DURBIN_99	DURBIN_99-BIODIESE	DURBIN_99-F250	UDDS

NO_MODE\$	CH4	THC	CO	NOX	PM	CO2	DTAL_WOF	BSFC_MEAS
0		0.01	0.414	5.114	0.079		24.11	0.426
0		0.01	0.414	5.114	0.079		24.11	0.426
0		0.016	0.394	5.224	0.071		24.1	0.424
0		0.016	0.394	5.224	0.071		24.1	0.424
0		0.03	0.39	5.23	0.079		24.2	0.434
0		0.03	0.39	5.23	0.079		24.2	0.434
0		0.2	0.71	4.59	0.105		26.7	0.377
0		0.2	0.71	4.59	0.105		26.7	0.377
0		0.244	0.74	4.521	0.107		26.9	0.387
0		0.244	0.74	4.521	0.107		26.9	0.387
0		0.26	0.78	4.603	0.105		26.743	0.385
0		0.26	0.78	4.603	0.105		26.743	0.385
0		0.19	0.654	4.729	0.102		26.2	0.377
0		0.19	0.654	4.729	0.102		26.2	0.377
0		0.01	0.921	5.03	0.049		20.7	0.456
0		0.01	0.921	5.03	0.049		20.7	0.456
0		0.02	0.926	4.909	0.055		20.6	0.456
0		0.02	0.926	4.909	0.055		20.6	0.456
0		0.013	0.76	4.92	0.03		20.8	0.441
0		0.013	0.76	4.92	0.03		20.8	0.441
0		0.06	1.419	4.624	0.089		21.8	0.406
0		0.06	1.419	4.624	0.089		21.8	0.406
0		0.04	1.228	4.634	0.059		21.871	0.404
0		0.057	1.476	4.484	0.102		22.2	0.399
0		0.057	1.476	4.484	0.102		22.2	0.399
0		0.023	1.396	4.503	0.073		22.1	0.392
0		0.023	1.396	4.503	0.073		22.1	0.392
0		0.07	1.25	4.846	0.086		11.3	0.518
0		0.07	1.25	4.846	0.086		11.3	0.518
0		0.09	1.309	4.886	0.076		11.2	0.518
0		0.09	1.309	4.886	0.076		11.2	0.518
0		0.06	0.914	4.896	0.04		11.3	0.517
0		0.06	0.914	4.896	0.04		11.3	0.517
0		0.21	1.604	4.79	0.109		11.9	0.465
0		0.21	1.604	4.79	0.109		11.9	0.465
0		0.14	1.196	4.88	0.069		12	0.472
0		0.14	1.196	4.88	0.069		12	0.472
0		0.31	2.05	4.673	0.128		12.1	0.435
0		0.31	2.05	4.673	0.128		12.1	0.435
0		0.19	1.546	4.733	0.076		12.1	0.453
0		0.19	1.546	4.733	0.076		12.1	0.453
8		0.0638	0.2534	4.1881	0.0798			
8		0.1507	0.2565	4.7397	0.1283			
8		0.0341	0.7064	5.9657	0.1701			
8		0.2395	0.742	5.959	0.1634			
8		0.0887	0.1436	5.6471	0.1164			
8		0.182	0.8169	6.1671	0.2618			
8		0.1872	0.2142	5.443	0.3111			
8		0.5388	1.3088	5.785	0.2409			
0		0.519	2.302	5.008	0.273			

NO_MODE\$	CH4	THC	CO	NOX	PM	CO2	DTAL_WOF	BSFC_MEAS
0		0.535	2.314	4.98	0.287			
0		0.535	2.326	4.961	0.287			
0		0.531	2.362	4.915	0.295			
0		0.528	2.483	4.85	0.334			
0		0.525	2.515	4.86	0.3414			
0		0.132	3.997	5.111	0.243			
0		0.163	4.099	5.113	0.258			
0		0.156	3.915	5.136	0.255			
0		0.167	4.021	5.153	0.253			
0		0.123	3.223	5.256	0.196			
0		0.137	3.242	5.244	0.167			
0		0.138	3.364	5.288	0.204			
0		0.142	3.401	5.315	0.207			
0		0.143	3.245	5.316	0.177			
0		0.15	3.65	5.188	0.197			
0		0.14	3.661	5.17	0.234			
0		0.157	3.616	5.204	0.23			
0		0.072	2.77	4.76	0.222	560	25.22	0.391
0		0.072	2.77	4.76	0.222	560	25.22	0.391
0		0.072	2.77	4.76	0.222	560	25.22	0.391
0		0.089	2.75	4.08	0.227	578	25.2	0.404
0		0.089	2.75	4.08	0.227	578	25.2	0.404
0		0.089	2.75	4.08	0.227	578	25.2	0.404
0		0.381	3.05	3.83	0.235	602	24.78	0.423
0		0.381	3.05	3.83	0.235	602	24.78	0.423
0		0.381	3.05	3.83	0.235	602	24.78	0.423
0		0.057	2.25	4.57	0.184	542	25.33	0.383
0		0.057	2.25	4.57	0.184	542	25.33	0.383
0		0.057	2.25	4.57	0.184	542	25.33	0.383
0		0.046	2.24	3.95	0.191	571	25.13	0.398
0		0.046	2.24	3.95	0.191	571	25.13	0.398
0		0.046	2.24	3.95	0.191	571	25.13	0.398
0		0.078	2.21	3.59	0.193	588	24.95	0.41
0		0.078	2.21	3.59	0.193	588	24.95	0.41
0		0.078	2.21	3.59	0.193	588	24.95	0.41
0		0.38	1.499	4.961	0.2238			
0		0.201	1.485	5.505	0.194			
		0.592	2.107	6.013	0.48	707		
		1.254	4.497	6.85	0.411	698.6		
		1.021	2.92	6.44	0.386	708.2		
		0.834	2.23	6.31	0.428	698.3		

NO_MODE\$	CH4	THC	CO	NOX	PM	CO2	DTAL_WOF	BSFC_MEAS
		2.71	43.77	32.79	0.91	2863		
		2.79	41.11	28.31	0.99	2786		
		3.23	45.07	26.74	0.86	2875		
0		2.71	21.03	24.61	2.01	2556		
0		2.52	21.26	24.84	1.24	2601		
0		2.48	23.91	28.45	1.12	2645		
0		3.14	15.79	36.84	0.67	2755		
0		3.23	16.71	36.35	0.67	2758		
0		3.94	19.54	32.37	1.41	2839		
0		1.98	36.71	32.08	0.68	2729		
0		1.97	38.12	32.52	0.65	2792		
0		2.03	32.83	33.18	0.64	2789		
0		1.81	18.99	32.31	1.45	2605		
0		1.64	18.81	33.56	1.18	2601		
0		1.66	14.14	31.15	1.03	2497		
0		3.32	16.41	30.65	1.94	2860		
0		3.25	15.47	31.01	1.27	2884		
0		3.26	14.39	30.43	1.23	2823		
0		0.83	2.26	5.68	0.297			0.387
0		0.76	1.94	5.85	0.272			0.396
0		0.66	3.57	10.79	0.58			0.477
0		0.63	3.35	11.08	0.564			0.488
0		0.435	1.19	5.62	0.265	653		
0		0.546	1.24	5.34	0.27	653		
0		0.57	1.22	4.43	0.257	671		
0		0.48	1.12	4.7	0.27	688		
0		0.42	1.03	4.78	0.258	688		
0		0.38	0.95	4.89	0.258	686		
0		0.508	1.24	5.47	0.247	649		
0		0.437	1.2	5.54	0.257	653		
0		0.346	0.95	5.82	0.244	651		
0		0.411	1.06	5.72	0.244	652		
0		0.376	1.02	5.81	0.243	649		

NO_MODE\$	CH4	THC	CO	NOX	PM	CO2	DTAL_WOF	BSFC_MEAS
0		0.363	1.04	5.87	0.238	652		
		2.01	3.59	9.96	0.833	760	11.04	
		2.01	3.59	9.96	0.833	760	11.04	
		2.01	3.59	9.96	0.833	760	11.04	
		1.48	2.73	10.18	0.814	773	11.07	
		1.48	2.73	10.18	0.814	773	11.07	
		1.48	2.73	10.18	0.814	773	11.07	
		1.03	3.79	6.53	0.36	6.75		
		0.84	2.65	6.23	0.35	6.8		
		0.69	2.06	6.01	0.4	6.79		
		0.47	1.94	5.78	0.39	6.83		
7		0.23	1.7	6.42	0.07			
7		0.15	1.1	7.12	0.05			
7		0.22	1.3	6.41	0.06			
7		0.2	1.1	6.73	0.05			
7		0.16	0.8	7.53	0.06			
7		0.22	1.2	7.11	0.03			
0		0.392	2.004	4.303	0.182			0.392
0		0.392	2.004	4.303	0.182			0.392
0		0.392	2.004	4.303	0.182			0.392
0		0.392	2.004	4.303	0.182			0.392
0		0.319	1.843	4.331	0.174			0.392
0		0.319	1.843	4.331	0.174			0.392
0		0.319	1.843	4.331	0.174			0.392
0		0.319	1.843	4.331	0.174			0.392
0		0.3	1.47	4.37	0.106	609	12.5	0.424
0		0.3	1.47	4.37	0.106	609	12.5	0.424
0		0.25	1.42	4.25	0.073	606	12.4	0.422
0		0.25	1.42	4.25	0.073	606	12.4	0.422
0		0.3	1.55	4.4	0.107	635	12.2	0.442
0		0.3	1.55	4.4	0.107	635	12.2	0.442
0		0.11	0.95	4.26	0.091	645	11.7	0.5
0		0.11	0.95	4.26	0.091	645	11.7	0.5
0		0.07	0.64	4.26	0.047	651	11.7	0.505

NO_MODE\$	CH4	THC	CO	NOX	PM	CO2	DTAL_WOF	BSFC_MEAS
0		0.07	0.64	4.26	0.047	651	11.7	0.505
0		0.11	1.06	4.41	0.092	650	11.4	0.505
0		0.11	1.06	4.41	0.092	650	11.4	0.505
0		0.09	0.9	4.52	0.08	642	11.8	0.498
0		0.09	0.9	4.52	0.08	642	11.8	0.498
0		0.06	0.61	4.48	0.042	640	11.8	0.494
0		0.06	0.61	4.48	0.042	640	11.8	0.494
0		0.17	1.03	4.25	0.092	621		0.458
0		0.17	1.03	4.25	0.092	621		0.458
0		0.12	0.74	4.37	0.058	637	12.1	0.47
0		0.12	0.74	4.37	0.058	637	12.1	0.47
0		0.16	0.97	4.3	0.087	625	12.2	0.46
0		0.16	0.97	4.3	0.087	625	12.2	0.46
0		0.11	0.7	4.3	0.055	623	12.2	0.458
0		0.11	0.7	4.3	0.055	623	12.2	0.458
0		0.23	1.24	4.31	0.1	623	12.1	0.444
0		0.23	1.24	4.31	0.1	623	12.1	0.444
0		0.16	0.94	4.3	0.067	645	12.2	0.459
0		0.16	0.94	4.3	0.067	645	12.2	0.459
0		0.22	1.14	4.39	0.093	618	12.2	0.444
0		0.22	1.14	4.39	0.093	618	12.2	0.444
0		0.15	0.97	4.33	0.064	616	12.2	0.442
0		0.15	0.97	4.33	0.064	616	12.2	0.442
0		0.27	1.43	4.99	0.104		19.48	
0		0.27	1.43	4.99	0.104		19.48	
0		0.27	1.43	4.99	0.104		19.48	
0		0.25	1.22	5.17	0.089		19.43	
0		0.25	1.22	5.17	0.089		19.43	
0		0.25	1.22	5.17	0.089		19.43	
0		0.23	1.11	5.05	0.069		19.5	
0		0.23	1.11	5.05	0.069		19.5	
0		0.23	1.11	5.05	0.069		19.5	
0		0.298	1.732	5.471	0.128	634.2		
0		0.29	1.704	5.501	0.121	626.9		
0		0.31	1.762	5.685	0.112	619.9		
0		0.28	1.159	5.592	0.053	625.4		
0		0.299	1.173	5.678	0.048	625.9		
0		0.278	1.09	5.666	0.046	619.2		
0		0.207	1.089	5.502	0.092	621.6		
0		0.215	1.045	5.559	0.079	620.2		

NO_MODE\$	CH4	THC	CO	NOX	PM	CO2	DTAL_WOF	BSFC_MEAS
0		0.209	1.04	5.579	0.076	616.6		
0		0.132	0.967	5.709	0.077	627.2		
0		0.112	0.84	5.812	0.067	625.4		
0		0.103	0.851	5.86	0.063	624		
5		0.41	0.589	4.133	0.179			0.3767
5		0.239	0.515	5.08	0.201			0.431
0		3.06	3.56	27.86	1.47	2761		
0		2.92	3.58	26.2	1.33	2777		
0		2.94	3.65	26.35	1.29	2748		
0		1.83	1.96	19.69	1.39	2206		
0		1.55	1.97	18.09	1.52	2131		
0		1.79	1.96	20.04	1.35	2205		
0		3.37	6.03	27.26	1.46	2787		
0		3.46	4.41	27.41	1.2	2738		
0		3.45	4.58	27.36	1.24	2730		
0		3.12	3.64	26.65	1.66	2697		
0		2.9	4.21	26.63	1.43	2739		
0		2.82	4.08	26.85	1.39	2755		
0		1.37	1.84	20.45	0.94	2079		
0		1.51	1.74	21.11	0.88	2134		
0		1.44	1.64	21.44	1.02	2176		
0		3.38	5.28	27.39	1.58	2799		
0		3.25	7.65	26.86	1.44	2766		
0		3.3	5.51	26.93	1.35	2735		
8		0.0895	0.8206	7.1615				
8		0.0746	0.7684	7.3107				
8		0.0671	0.8131	6.2663				
8		0.0224	0.2611	7.5345				
8		0.0224	0.2611	7.7583				
8		0.0224	0.2163	7.0123				
0		0.164	4.458	4.635	0.3	553		0.393

NO_MODE\$	CH4	THC	CO	NOX	PM	CO2	DTAL_WOF	BSFC_MEAS
0		0.164	4.458	4.635	0.3	553		0.393
0		0.164	4.458	4.635	0.3	553		0.393
0		0.164	4.458	4.635	0.3	553		0.393
0		0.164	4.458	4.635	0.3	553		0.393
0		0.164	4.458	4.635	0.3	553		0.393
0		0.164	4.458	4.635	0.3	553		0.393
0		0.164	4.458	4.635	0.3	553		0.393
0		0.164	4.458	4.635	0.3	553		0.393
0		0.164	4.458	4.635	0.3	553		0.393
0		0.164	4.458	4.635	0.3	553		0.393
0		0.164	4.458	4.635	0.3	553		0.393
0		0.164	4.458	4.635	0.3	553		0.393
0		0.164	4.458	4.635	0.3	553		0.393
0		0.164	4.458	4.635	0.3	553		0.393
0		0.143	4.141	4.688	0.259	551		0.398
0		0.143	4.141	4.688	0.259	551		0.398
0		0.143	4.141	4.688	0.259	551		0.398
0		0.148	3.668	4.68	0.222	550		0.404
0		0.148	3.668	4.68	0.222	550		0.404
0		0.148	3.668	4.68	0.222	550		0.404
0		0.12	3.178	4.848	0.165	549		0.424
0		0.12	3.178	4.848	0.165	549		0.424
0		0.12	3.178	4.848	0.165	549		0.424
0		0.092	2.363	5.166	0.102	564		0.443
0		0.092	2.363	5.166	0.102	564		0.443
0		0.092	2.363	5.166	0.102	564		0.443
0		0.72	1.51	4.23	0.197	654	18.94	0.488
0		0.72	1.51	4.23	0.197	654	18.94	0.488
0		0.72	1.51	4.23	0.197	654	18.94	0.488
0		0.72	1.51	4.23	0.197	654	18.94	0.488
0		0.63	1.43	4.38	0.186	657	18.92	0.493
0		0.63	1.43	4.38	0.186	657	18.92	0.493
0		0.63	1.43	4.38	0.186	657	18.92	0.493
0		0.63	1.43	4.38	0.186	657	18.92	0.493
0		0.56	1.32	4.46	0.175	657	18.85	0.496
0		0.56	1.32	4.46	0.175	657	18.85	0.496
0		0.56	1.32	4.46	0.175	657	18.85	0.496
0		0.56	1.32	4.46	0.175	657	18.85	0.496
0		0.54	1.14	4.8	0.173	685	19.03	0.496
0		0.54	1.14	4.8	0.173	685	19.03	0.496
0		0.54	1.14	4.8	0.173	685	19.03	0.496
0		0.54	1.14	4.8	0.173	685	19.03	0.496
0		0.43	1.07	4.86	0.162	684	19.05	0.5
0		0.43	1.07	4.86	0.162	684	19.05	0.5
0		0.43	1.07	4.86	0.162	684	19.05	0.5
0		0.43	1.07	4.86	0.162	684	19.05	0.5
0		0.47	1.77	4.27		666	20.96	
0		0.38	1.45	4.51	0.199	668	20.82	

NO_MODE\$	CH4	THC	CO	NOX	PM	CO2	DTAL_WOF	BSFC_MEAS
13		0.373	1.94	8.847				
13		0.373	1.94	8.847				
13		0.373	1.94	8.847				
13		0.373	1.94	8.847				
13		0.373	1.94	8.847				
13		0.373	1.94	8.847				
13		0.373	1.94	8.847				
13					0.14			
13					0.14			
13					0.14			
13					0.14			
13					0.14			
13					0.14			
13					0.14			
13					0.14			
13					0.14			
13					0.14			
13					0.14			
13					0.14			
13					0.14			
13					0.14			
13		0.373	2.31	9.18	0.13			
13		0.373	2.31	9.18	0.13			
13		0.373	2.31	9.18	0.13			
13		0.224	2.09	9.76				
13		0.224	2.09	9.76				
13		0.224	2.09	9.76				
13		0.224	2.09	9.76				
13		0.224	2.09	9.76				
13		0.224	2.09	9.76				
13		0.224	2.09	9.76				
13					0.172			
13					0.172			
13					0.172			
13		0.373	1.194	7.61	0.119			
13		0.373	1.194	7.61	0.119			
13		0.373	1.194	7.61	0.119			
13		0.373	1.194	7.61	0.119			
13		0.298	1.044	7.982	0.112			
13		0.298	1.044	7.982	0.112			
13		0.149	0.746	9.25	0.09			
13		0.149	0.746	9.25	0.09			
13		0.448	1.12	9.1	0.17			
13		0.448	1.12	9.1	0.17			
13		0.448	1.12	9.1	0.17			
13		0.448	1.12	9.1	0.17			
13		0.373	1.12	10.7	0.149			
13		0.632	2.421	7.5	0.47			0.383

NO_MODE\$	CH4	THC	CO	NOX	PM	CO2	DTAL_WOF	BSFC_MEAS
13		0.323	1.969	6.873	0.42			0.452
0		0.67	3.32	7.59	0.59			0.432
0		0.37	3.01	5.84	0.73			0.494
13		0.04	1.52	4.16	0.138	542		0.383
13		0.05	1.59	4.1	0.138	543		0.385
13		0.05	1.52	4.13	0.139	549		0.389
13		0.05	1.34	3.98	0.114	498		0.359
13		0.07	1.5	4.34	0.121	553		0.4
13		0.07	1.47	4.24	0.116	550		0.397
		0.6	1.6	8.52	0.2		20.1	0.452
		0.6	1.6	8.52	0.2		20.1	0.452
		0.6	1.6	8.52	0.2		20.1	0.452
		0.53	1.39	8.93	0.2		20.1	0.457
		0.53	1.39	8.93	0.2		20.1	0.457
		0.53	1.39	8.93	0.2		20.1	0.457
		0.66	1.56	8.83	0.2		19.7	0.449
		0.66	1.56	8.83	0.2		19.7	0.449
		0.29	1.21	8.18	0.14		19.7	0.467
		0.29	1.21	8.18	0.14		19.7	0.467
		0.29	1.21	8.18	0.14		19.7	0.467
		0.25	1.05	8.35	0.12		19.7	0.467
		0.25	1.05	8.35	0.12		19.7	0.467
		0.25	1.05	8.35	0.12		19.7	0.467
0		0.08	2.23	4.622	0.224		25.1	0.382
0		0.072	2.314	4.789	0.224		24.59	0.394
0		0.074	2.215	4.651	0.215		25.14	0.384
0		0.082	2.257	4.648	0.22		25.17	0.383
0		0.079	2.275	4.684	0.215		25.16	0.379
0		0.09	2.26	4.755	0.206		25.28	0.384
0		0.09	2.23	4.746	0.207		25.2	0.386
0		0.078	2.22	4.712	0.204		25.09	0.387
0		0.086	2.191	4.682	0.21		25.09	0.377
0		0.08	2.245	4.553	0.211		25.27	0.388
0		0.09	2.215	4.605	0.209		25.03	0.385
0		0.065	2.26	4.64	0.218		25.08	0.396
0		0.088	2.283	4.72	0.209		25.15	0.394
0		0.149	2.079	4.693	0.2		25.09	0.402
0		0.131	1.996	4.689	0.19		25.15	0.399

NO_MODE\$	CH4	THC	CO	NOX	PM	CO2	DTAL_WOF	BSFC_MEAS
0		0.122	2.027	4.713	0.189		25.15	0.402
0		0.1	2.063	4.676	0.195		25.15	0.402
0		0.089	2.084	4.644	0.215		25.09	0.403
0		0.091	2.054	4.527	0.199		25.19	0.399
0		0.091	2.048	4.575	0.196		25.17	0.4
0		0.075	2.058	4.628	0.196		25.14	0.397
0		0.078	2.021	4.591	0.2		24.93	0.407
0		0.081	2.007	4.634	0.192		24.98	0.402
0		0.763	3.6	6.697	0.101	663.5		
0		0.763	3.6	6.697	0.101	663.5		
0		0.763	3.6	6.697	0.101	663.5		
0		0.637	2.96	6.457	0.129	668.2		
0		0.637	2.96	6.457	0.129	668.2		
0		0.637	2.96	6.457	0.129	668.2		
0		0.48	2.49	6.243	0.142	666.5		
0		0.48	2.49	6.243	0.142	666.5		
0		0.48	2.49	6.243	0.142	666.5		
0		0.278	2.405	6.153	0.127	677.5		
0		0.278	2.405	6.153	0.127	677.5		
0		0.278	2.405	6.153	0.127	677.5		
0		0.278	2.405	6.153	0.127	677.5		
0		0.854	3.683	6.747	0.184	669.5		
0		0.854	3.683	6.747	0.184	669.5		
0		0.854	3.683	6.747	0.184	669.5		
0		0.712	3.033	6.24	0.195	646.6		
0		0.712	3.033	6.24	0.195	646.6		
0		0.712	3.033	6.24	0.195	646.6		
0		0.483	2.4	6.55	0.249	687.1		
0		0.483	2.4	6.55	0.249	687.1		
0		0.324	2.403	5.913	0.261	654.8		
0		0.324	2.403	5.913	0.261	654.8		

NO_MODE\$	CH4	THC	CO	NOX	PM	CO2	DTAL_WOF	BSFC_MEAS
0		0.324	2.403	5.913	0.261	654.8		
0		0.753	3.298	7.943	0.097	767.2		
0		0.753	3.298	7.943	0.097	767.2		
0		0.753	3.298	7.943	0.097	767.2		
0		0.695	2.773	7.547	0.125	776		
0		0.695	2.773	7.547	0.125	776		
0		0.695	2.773	7.547	0.125	776		
0		0.522	2.16	7.25	0.122	756		
0		0.522	2.16	7.25	0.122	756		
0		0.522	2.16	7.25	0.122	756		
0		0.29	1.763	7.188	0.108	767		
0		0.29	1.763	7.188	0.108	767		
0		0.29	1.763	7.188	0.108	767		
0		0.29	1.763	7.188	0.108	767		
0		0.858	3.133	7.773	0.172	749		
0		0.858	3.133	7.773	0.172	749		
0		0.858	3.133	7.773	0.172	749		
0		0.858	3.133	7.773	0.172	749		
0		0.671	2.263	7.553	0.173	754		
0		0.671	2.263	7.553	0.173	754		
0		0.671	2.263	7.553	0.173	754		
0		0.551	2.03	7.197	0.23	754		
0		0.551	2.03	7.197	0.23	754		
0		0.551	2.03	7.197	0.23	754		
0		0.316	1.733	7.133	0.232	754		
0		0.316	1.733	7.133	0.232	754		
0		0.316	1.733	7.133	0.232	754		
0		0.42	2.16	10.06	0.268	678	19.15	0.45

NO_MODE\$	CH4	THC	CO	NOX	PM	CO2	DTAL_WOF	BSFC_MEAS
0		0.42	2.16	10.06	0.268	678	19.15	0.45
0		0.42	2.16	10.06	0.268	678	19.15	0.45
0		0.36	1.81	10.51	0.258	685	19.08	0.462
0		0.36	1.81	10.51	0.258	685	19.08	0.462
0		0.36	1.81	10.51	0.258	685	19.08	0.462
0		0.36	1.81	10.51	0.258	685	19.08	0.462
0		0.36	1.81	10.51	0.258	685	19.08	0.462
0		0.36	1.81	10.51	0.258	685	19.08	0.462
0		0.36	1.81	10.51	0.258	685	19.08	0.462
0		0.36	1.81	10.51	0.258	685	19.08	0.462
0		0.36	1.81	10.51	0.258	685	19.08	0.462
0		0.36	1.81	10.51	0.258	685	19.08	0.462
0		0.36	1.81	10.51	0.258	685	19.08	0.462
0		0.36	1.81	10.51	0.258	685	19.08	0.462
0		0.36	1.81	10.51	0.258	685	19.08	0.462
0		0.36	1.81	10.51	0.258	685	19.08	0.462
0		0.29	1.69	10.71	0.259	683	19.06	0.466
0		0.29	1.69	10.71	0.259	683	19.06	0.466
0		0.29	1.69	10.71	0.259	683	19.06	0.466
0		0.29	1.69	10.71	0.259	683	19.06	0.466
0		0.41	2.13	9.69	0.258	689	19.1	0.45
0		0.41	2.13	9.69	0.258	689	19.1	0.45
0		0.41	2.13	9.69	0.258	689	19.1	0.45
0		0.32	1.77	10.03	0.241	680	19.09	0.461
0		0.32	1.77	10.03	0.241	680	19.09	0.461
0		0.32	1.77	10.03	0.241	680	19.09	0.461
0		0.8	2.1	8.86	0.296	682	19.13	0.461
0		0.35	2.19	9.04	0.269	688	19.07	0.466

NO_MODE\$	CH4	THC	CO	NOX	PM	CO2	DTAL_WOF	BSFC_MEAS
0		0.35	2.19	9.04	0.269	688	19.07	0.466
0		0.35	2.19	9.04	0.269	688	19.07	0.466
9		2.88	3.21	19.12	0.45			
9		2.53	2.89	15.64	0.3			
9		2.46	2.74	16.04	0.27			
9		2.25	2.63	16.12	0.33			
9		2.11	2.55	19.38	0.3			
9		0.88	0.97	14.02	0.16			
9		2.03	2.68	16.43	0.3			
9		1.72	2.51	15.9	0.33			
9		1.43	0.8	19.35	0.61			
9		2.41	2.68	13.48	0.379			
9		2.1	2.71	12.26	0.32			
9		2.26	2.6	12.34	0.311			
9		2.2	2.97	14.12	0.34			
9		1.99	2.48	12.57	0.32			
9		0.15	2.18	4.25	0.23			
9		0.15	2.18	4.29	0.22			
9		0.13	2.2	4.3	0.23			
0		0.14	2.13	4.34	0.22			
0		0.14	2.12	4.28	0.22			
0		0.14	2.07	4.34	0.21			
0		0.13	2.02	4.47	0.19			
0		0.13	2.02	4.44	0.19			
0		0.14	2.01	4.44	0.19			
0		0.5	1.69	8.76	0.21			
0		0.5	1.69	8.76	0.21			
0		0.5	1.69	8.76	0.21			

NO_MODE\$	CH4	THC	CO	NOX	PM	CO2	DTAL_WOF	BSFC_MEAS
0		0.53	1.36	9.04	0.2			
0		0.53	1.36	9.04	0.2			
0		0.53	1.36	9.04	0.2			
0		0.48	1.36	9.41	0.19			
0		0.48	1.36	9.41	0.19			
0		0.48	1.36	9.41	0.19			
0		0.48	1.75	8.06	0.25			
0		0.48	1.75	8.06	0.25			
0		0.48	1.75	8.06	0.25			
0		0.47	1.65	8.36	0.24			
0		0.47	1.65	8.36	0.24			
0		0.47	1.65	8.36	0.24			
0		0.53	1.89	7.81	0.24			
0		0.53	1.89	7.81	0.24			
0		0.53	1.89	7.81	0.24			
0		0.108	5.551	4.698	0.274	566.4	22.69	
0		0.097	5.828	4.518	0.298	568.5	22.74	
0		0.112	5.184	4.505	0.279	568.8	22.64	
0		0.111	4.892	4.655	0.221	568.6	22.66	
0		0.114	4.807	4.616	0.221	565.4	22.62	
0		0.114	4.864	4.61	0.221	567.3	22.66	
0		0.114	5.87	4.663	0.29	568.4	22.64	
0		0.117	5.581	4.667	0.276	567.6	22.73	
0		0.097	5.193	4.705	0.226	566.3	22.67	
0		0.088	5.133	4.702	0.224	565.7	22.71	
0		0.094	5.133	4.72	0.238	567.9	22.65	
0		0.113	5.916	4.698	0.29	567.7	22.7	

NO_MODE\$	CH4	THC	CO	NOX	PM	CO2	DTAL_WOF	BSFC_MEAS
0		0.105	5.57	4.736	0.28	568.9	22.69	
0		0.116	5.171	4.649	0.255	568.6	22.65	
0		0.11	5.229	4.702	0.266	567.4	22.69	
0		0.115	5.431	4.597	0.273	597.3	22.69	
0		0.101	5.208	4.613	0.244	568.2	22.71	
0		0.095	5.744	4.636	0.294	562.4	22.59	
0		0.114	5.304	4.655	0.277	569.5	22.58	
0		0.097	5.752	4.538	0.301	573.5	22.43	
0		0.104	5.715	4.554	0.308	573.3	22.47	
0		0.102	5.649	4.544	0.296	573.8	22.45	
0		0.056	5.165	4.496	0.231	572.2	22.41	
0		0.074	4.978	4.526	0.239	614.8	22.45	
0		0.076	4.816	4.508	0.238	572.2	22.43	
0		0.096	5.488	4.579	0.241	572	22.43	
0		0.101	5.164	4.549	0.279	571.6	22.41	
0		0.098	5.487	4.643	0.299	572.3	22.47	
0		0.132	5.194	4.588	0.301	573.24		
0		0.124	5.806	4.666	0.311	570.45		
0		0.123	5.53	4.637	0.315	571.13		
0		0.076	3.509	5.323	0.083	579.63		
0		0.076	3.509	5.323	0.083	579.63		
0		0.076	3.509	5.323	0.083	579.63		
0		0.11	4.983	4.679	0.243	574.5	22.43	
0		0.111	4.891	4.631	0.262	572.5	22.46	
0		0.11	4.985	4.632	0.264	574.1	22.46	
0		0.065	2.926	5.074	0.076	570.14		
0		0.07	2.997	5.096	0.074	568.2		

NO_MODE\$	CH4	THC	CO	NOX	PM	CO2	DTAL_WOF	BSFC_MEAS
0		0.066	2.997	5.08	0.081	567.98		
0		0.109	4.902	4.563	0.263	568.6	22.55	
0		0.069	4.719	4.582	0.26	570.2	22.54	
0		0.069	2.966	4.783	0.073	571.52		
0		0.077	2.168	4.594	0.065	605.76		
0		0.075	2.223	4.611	0.067	572.2		
0		0.12	5.508	4.634	0.295	577.4	22.33	
0		0.112	4.902	4.604	0.277	569.9	22.3	
0		0.125	4.927	4.626	0.268	583.1	22.32	
0		0.131	5.135	4.632	0.259	568.9	22.44	
0		0.12	4.775	4.631	0.24	568.2	22.46	
0		0.116	4.718	4.626	0.221	568.1	22.47	
0		0.122	4.994	4.595	0.254	568	22.43	
0		0.12	4.926	4.603	0.253	566.7	22.47	
0		0.106	4.79	4.602	0.258	569	22.52	
0		0.075	2.612	4.69	0.066	562.4	22.19	
0		0.069	2.744	4.69	0.064	560.5	22.26	
0		0.066	2.707	4.694	0.069	561.8	22.26	
0		0.104	4.63	4.579	0.243	566.8	22.54	
0		0.098	4.755	4.582	0.249	572.6	22.41	
0		0.106	4.606	4.578	0.248	568.3	22.35	
0		0.061	2.899	4.642	0.068	563.58		
0		0.061	2.866	4.648	0.071	561.08		
0		0.058	2.811	4.65	0.07	560.05		
0		0.097	4.94	4.571	0.241	570.3	22.4	
0		0.107	4.58	4.569	0.232	568.4	22.41	
0		0.105	4.663	4.567	0.241	568.3	22.4	

NO_MODE\$	CH4	THC	CO	NOX	PM	CO2	DAL_WOF	BSFC_MEAS
0		0.106	5.238	4.612	0.274	570.7	22.41	
0		0.117	4.928	4.581	0.246	569.1	22.43	
0		0.097	4.836	4.581	0.247	567.5	22.45	
0		0.053	2.953	4.79	0.069	567.05		
0		0.055	2.951	4.827	0.066	567.79		
0		0.055	3.066	4.81	0.07	565.5		
0		0.096	4.93	4.606	0.248	570	22.38	
0		0.094	4.693	4.601	0.237	570.6	22.38	
0		0.093	5.216	4.628	0.263	567.5	22.52	
0		0.093	4.993	4.654	0.263	565.8	22.53	
0			2.508	4.719	0.058	558.7	21.78	
0			2.406	4.744	0.057	557.2	21.82	
0			2.405	4.737	0.058	558.3	21.76	
0		0.075	5.01	4.554	0.241	567.24	22.358	
0		0.079	4.794	4.545	0.242	565.97	22.373	
0		0.077	4.744	4.569	0.238	567.2	22.349	
0		0.067	4.726	4.481	0.253	561.95	22.242	
0		0.056	4.439	4.483	0.246	560.11	22.23	
0		0.044	4.763	4.466	0.259	563.22	22.267	
0		0	4.521	4.465	0.258	561.4	22.275	
0			4.206	4.48	0.216	561.34	22.23	
0			4.252	4.504	0.231	558.83	22.25	
0		0.053	4.605	4.624	0.247	562	22.43	
0		0.057	4.445	4.664	0.219	551	22.37	
0		0.054	4.769	4.634	0.229	564	22.47	
0		0.019	2.589	4.917	0.054	564	21.95	
0		0.03	2.492	5.025	0.057	567	21.96	

NO_MODE\$	CH4	THC	CO	NOX	PM	CO2	DAL_WOF	BSFC_MEAS
0		0.027	2.472	4.769	0.054	565	21.91	
0		0.028	2.409	4.974	0.056	566	21.9	
0		0.051	0.665	5.31	0.035	551.7		
0		0.051	0.665	5.31	0.035	551.7		
0		0.051	0.665	5.31	0.035	551.7		
0		0.051	0.665	5.31	0.035	551.7		
0		0.051	0.665	5.31	0.035	551.7		
0		0.051	0.665	5.31	0.035	551.7		
0		0.051	0.688	5.48	0.04	557.9		
0		0.051	0.688	5.48	0.04	557.9		
0		0.051	0.688	5.48	0.04	557.9		
0		0.051	0.688	5.48	0.04	557.9		
0		0.051	0.688	5.48	0.04	557.9		
0		0.051	0.688	5.48	0.04	557.9		
0		0.046	0.638	5.39	0.042	548.9		
0		0.046	0.638	5.39	0.042	548.9		
0		0.046	0.638	5.39	0.042	548.9		
0		0.046	0.638	5.39	0.042	548.9		
0		0.046	0.638	5.39	0.042	548.9		
0		0.046	0.638	5.39	0.042	548.9		
0		0.049	0.665	5.21	0.044	551.4		
0		0.049	0.665	5.21	0.044	551.4		
0		0.049	0.665	5.21	0.044	551.4		
0		0.049	0.665	5.21	0.044	551.4		
0		0.049	0.665	5.21	0.044	551.4		
0		0.049	0.665	5.21	0.044	551.4		
0		0.047	0.705	5.37	0.043	539.4		
0		0.047	0.705	5.37	0.043	539.4		
0		0.047	0.705	5.37	0.043	539.4		
0		0.047	0.705	5.37	0.043	539.4		
0		0.047	0.705	5.37	0.043	539.4		
0		0.047	0.705	5.37	0.043	539.4		
0		0.052	0.686	5.18	0.043	546.3		
0		0.052	0.686	5.18	0.043	546.3		
0		0.052	0.686	5.18	0.043	546.3		
0		0.052	0.686	5.18	0.043	546.3		
0		0.052	0.686	5.18	0.043	546.3		
0		0.05	0.673	5.23	0.04	550.3		
0		0.05	0.673	5.23	0.04	550.3		
0		0.05	0.673	5.23	0.04	550.3		
0		0.05	0.673	5.23	0.04	550.3		
0		0.05	0.673	5.23	0.04	550.3		
0		0.05	0.673	5.23	0.04	550.3		
0		0.048	0.717	5.41	0.036	562.8		
0		0.049	0.758	5.55	0.038	564.5		
0		0.043	0.718	5.42	0.041	560.5		
0		0.046	0.724	5.19	0.042	549.2		
0		0.044	0.735	5.36	0.043	554		

NO_MODE\$	CH4	THC	CO	NOX	PM	CO2	DTAL_WOF	BSFC_MEAS
0		0.044	0.728	5.15	0.043	544.4		
0		0.049	0.709	5.25	0.037	560.6		
0		0.124	1.4	4.52	0.076	548.6		
0		0.124	1.4	4.52	0.076	548.6		
0		0.124	1.4	4.52	0.076	548.6		
0		0.124	1.4	4.52	0.076	548.6		
0		0.124	1.4	4.52	0.076	548.6		
0		0.124	1.4	4.52	0.076	548.6		
0		0.122	1.33	4.5	0.076	542		
0		0.122	1.33	4.5	0.076	542		
0		0.122	1.33	4.5	0.076	542		
0		0.122	1.33	4.5	0.076	542		
0		0.122	1.33	4.5	0.076	542		
0		0.121	1.47	4.56	0.077	554.4		
0		0.12	1.45	4.54	0.077	548.8		
0		0.096	1.26	4.68	0.072	549.5		
0		0.092	1.35	4.71	0.077	552.5		
0		0.016	4.553	4.769	0.214	575.3	21.791	
0		0.023	4.646	4.759	0.221	573.2	21.819	
0		0.02	4.612	4.792	0.222	573.5	21.836	
0		0.011	5.077	4.581	0.268	570.8	21.814	
0		0.018	4.762	4.635	0.248	571.7	21.767	
0		0.018	5.043	4.651	0.256	571.8	21.816	
0		0.018	5.208	4.682	0.259	574.7	21.752	
0		0.025	4.974	4.696	0.252	573.4	21.791	
0		0.014	5.135	4.695	0.234	575.4	21.758	
0		0.02	5.211	4.715	0.248	575.1	21.797	
0		0.014	5.141	4.627	0.323	573	21.756	
0		0.017	4.939	4.643	0.251	573.5	21.695	
0		0.026	5.248	4.804	0.229	573.6	21.718	
0		0.018	4.809	4.785	0.213	576.3	21.674	
0		0.019	5.022	4.742	0.225	576.6	21.71	
0		0.028	5.113	4.76	0.238	575.9	21.747	
0		0.025	4.982	4.76	0.244	574.4	21.723	
0		0.013	5.136	4.728	0.238	574.4	21.799	
0		0.02	4.962	4.74	0.234	573.7	21.814	
0		0.012	5.036	4.802	0.254	578.3	21.82	
0		0.008	5.067	4.748	0.251	576.3	21.828	
0		0.016	4.914	4.772	0.247	575.1	21.808	
0		0.017	5.137	4.759	0.25	577	21.79	
0		0.018	4.908	4.785	0.244	575.8	21.815	
0		0.02	4.863	4.805	0.244	575.8	21.812	
0		0.016	5.171	4.788	0.265	575.3	21.806	
0		0.022	4.804	4.809	0.248	573.9	21.834	
0		0.016	4.809	4.825	0.239	573.6	21.811	
0		0.01	4.766	4.707	0.254	560.5	21.766	
0		0.012	4.793	4.704	0.248	561.1	21.807	
0		0.013	4.811	4.758	0.224	562.4	21.808	
0		0.016	5.382	4.797	0.287	572.8	21.842	
0		0.02	5.584	4.832	0.305	574.9	21.827	

NO_MODE\$	CH4	THC	CO	NOX	PM	CO2	DTAL_WOF	BSFC_MEAS
0		0.021	5.039	4.871	0.264	570.7	21.842	
0		0.018	5.144	4.902	0.266	571.1	21.871	
0		0.017	4.984	4.872	0.255	570.6	21.898	
0		0.039	5.283	4.869	0.252	557.7	21.933	
0		0.048	4.906	4.818	0.242	555.1	21.928	
0		0.036	5.129	4.802	0.252	558.3	21.927	
0		0.054	5.107	4.831	0.267	553.9	21.885	
0		0.051	5.047	4.844	0.256	554.8	21.911	
0		0.053	5.186	4.846	0.267	555.6	21.902	
0		0.032	5.292	4.776	0.248	560.1	21.834	
0		0.028	5.082	4.795	0.256	561.1	21.855	
0		0.028	5.196	4.828	0.269	561.6	21.864	
0		0.041	5.072	4.859	0.248	556.3	21.918	
0		0.036	5.104	4.855	0.245	555.4	21.884	
0		0.037	5.245	4.843	0.262	557.7	21.881	
0		0.035	5.151	4.85	0.258	560.5	21.775	
0		0.037	5.415	4.855	0.263	561.1	21.806	
0		0.03	5.235	4.847	0.241	560.8	21.839	
0		0.033	5.03	4.846	0.231	558.2	21.882	
0		0.039	5.042	4.85	0.241	559.1	21.863	
0		0.029	5.473	4.88	0.233	558.7	21.825	
0		0.033	5.135	4.822	0.223	558	21.84	
0		0.027	5.55	4.855	0.24	560.5	21.827	
0		0.024	5.289	4.82	0.253	557.6	21.866	
0		0.023	5.044	4.816	0.25	558.3	21.849	
0		0.029	5.099	4.803	0.254	558.9	21.84	
0		0.012	4.021	4.033	0.174	549.5	21.632	
0		0.003	3.823	4.017	0.169	547.2	21.571	
0		0.005	3.684	4.029	0.159	547.4	21.542	
0		0.01	3.751	4.268	0.155	556	21.546	
0		0.001	3.557	4.238	0.146	552.9	21.492	
0		0.004	3.515	4.239	0.138	553.6	21.483	
0		0.006	3.089	5.069	0.082	572.5	21.419	
0		0.007	2.925	5.043	0.077	569.3	21.424	
0		0.006	2.943	5.033	0.074	572.6	21.439	
0		0.004	3.951	4.045	0.183	553.7	21.475	
0		0	3.99	4.024	0.178	549.8	21.464	
0		0.007	3.803	4.037	0.17	547.9	21.5	
0		0.011	3.047	5.367	0.073	577.1	21.448	
0		0.012	2.899	5.353	0.067	576.2	21.391	
0		0.013	2.973	5.378	0.065	575	21.409	
0		0	3.047	4.938	0.082	575.5	21.426	
0		0.004	3.289	5.007	0.08	579.6	21.395	
0		0.006	2.98	4.971	0.068	573.3	21.939	
0		0.007	3.106	5.008	0.078	576.7	21.394	
0		0.035	5.155	4.474	0.238	570.5	21.63	
0		0.021	4.859	4.473	0.225	568.5	21.624	
0		0.029	4.924	4.486	0.229	569.9	21.605	
0		0.019	4.759	4.899	0.196	577.6	21.744	
0		0.017	4.497	4.9	0.185	576.6	21.73	
0		0.019	4.766	4.928	0.208	579.3	21.754	

NO_MODE\$	CH4	THC	CO	NOX	PM	CO2	DTAL_WOF	BSFC_MEAS
0		0.002	4.862	4.919	0.201	576.1	21.73	
0		0.005	4.593	4.915	0.188	575.7	21.71	
0		0.012	4.583	4.915	0.188	574.8	21.734	
0		0.007	4.783	4.77	0.213	577.1	21.772	
0		0.012	4.606	4.784	0.209	579	21.802	
0		0.009	4.584	4.786	0.202	574.8	21.762	
0		0.019	4.491	4.61	0.195	568.3	21.719	
0		0.025	4.366	4.602	0.191	566.9	21.68	
0		0.023	4.143	4.607	0.18	566.1	21.695	
0		0.014	4.508	4.601	0.196	569.5	21.723	
0		0.019	4.399	4.579	0.188	568.2	21.732	
0		0.019	4.374	4.578	0.187	567.2	21.726	
0		0.029	4.687	4.947	0.194	558.4	21.815	
0		0.04	4.589	4.949	0.189	558.9	21.839	
0		0.042	4.571	4.928	0.191	559.1	21.865	
0		0.113	5.837	5.14	0.256	580.6	21.486	
0		0.082	4.069	4.521	0.204	555.3	21.42	
0		0.085	4.011	4.52	0.198	554.3	21.421	
0		0.091	3.937	4.542	0.194	555.1	21.401	
0		0.044	3.749	5	0.119	555.8	21.445	
0		0.045	3.5	4.915	0.112	557.5	21.483	
0		0.049	3.585	4.904	0.112	554.9	21.464	
0		0.018	4.66	4.947	0.197	558.2	21.81	
0		0.026	4.843	4.895	0.206	559.3	21.786	
0		0.025	4.85	4.896	0.201	559.4	21.812	
0		0.018	4.824	4.887	0.195	557.7	21.833	
0		0.015	4.758	4.875	0.194	559.6	21.772	
0		0.019	4.56	4.87	0.191	559.1	21.782	
0		0.43	1.515	8.188	0.07			
0		0.437	1.625	8.162	0.075			
0		0.391	1.49	8.704	0.071			
0		0.417	1.525	8.901	0.071			
0		0.311	1.4	8.119	0.054			
0		0.35	1.435	8.511	0.065			
0		0.244	1.442	8.388	0.064			
0		0.264	1.424	8.22	0.065			
0		0.611	2.163	5.99	0.064			
0		0.615	2.269	6.188	0.078			
0		0.584	2.251	6.783	0.066			
0		0.6	2.238	6.475	0.09			
0		0.434	1.864	6.011	0.095			
0		0.44	1.845	6.15	0.109			
0		0.532	1.927	6.252	0.086			
0		0.512	1.943	6.091	0.105			
0		0.207	1.649	6.101	0.112			
0		0.214	1.653	6.294	0.134			
0		0.182	1.791	6.702	0.073			
0		0.201	1.787	6.701	0.108			
0		0.868	2.051	6.517	0.179			
0		0.924	2.119	6.429	0.2			
0		0.928	2.091	6.444	0.182			

NO_MODE\$	CH4	THC	CO	NOX	PM	CO2	DTAL_WOF	BSFC_MEAS
0		1	2.109	6.379	0.212			
0		1.083	2.167	6.16	0.503			
0		1.07	2.171	6.436	0.491			
0		1.1	2.22	6.343	0.421			
0		1.19	2.218	6.274	0.457			
0		0.736	2.23	7.032	0.746			
0		0.927	2.31	7.121	0.873			
0		0.603	2.274	6.674	0.744			
0		0.684	2.263	7.221	0.95			
0		0.323	1.487	6.427	0.293			
0		0.299	1.53	6.108	0.368			
0		0.379	1.355	6.573	0.398			
0		0.282	1.395	6.407	0.371			
0		0.309	1.405	6.262	0.432			
0		0.325	1.333	6.511				
0		0.278	1.269	6.692	0.408			
0		0.321	1.307	7.007	0.442			
0		0.343	1.269	7.462	0.453			

Translation table entries

aspirated	aspirate_n	aspirate_d
CHARGED	1	Turbocharged or supercharged
NATURAL	2	Naturally aspirated
TURBO	3	Turbocharged
SUPER	4	Supercharged

fi_meth	fi_meth_n	fi_meth_d
DI	1	Direct Injection
IDI	2	Indirect Injection
CARB	3	Carburated

fi_type	fi_type_n	fi_type_d
PFI	1	Port Fuel Injection
NOTFI	2	Not Fuel Injected
TBI	3	Throttle Body Fuel Inject
DIRECT	4	Into Cylinder Injection
INDIR	5	Indirect

eng_cycle	eng_cycl_n	eng_cycl_d
2	1	2-Stroke
4	2	4-Stroke

egr_type	egr_type_n	egr_type_d
HOT	1	Hot
COOLED	2	Cooled
NONE	3	No EGR

cooling	cooling_n	cooling_d
AIR_AIR	1	Air - Air
AIR_LIQ	2	Air - Liquid
NONE	3	No Intercooler

cetane_typ	cetane_t_n	cetane_t_d
P	2	Peroxide Type
N	1	Nitrate Type
Z	3	None Used

cat_type	cat_type_n	cat_type_d
NONE	1	NO CATALYST (INCL DIESELS)
OXID	2	OXIDATION CATALYST
3WAY	3	3-WAY CATALYST
OX3W	4	OXIDATION PLUS 3-WAY CATALYST

vehclass	vehclass_n	vehclass_d
LDV	1	LIGHT-DUTY AUTO (HISTORICAL DATA, PRE-98)
LDT1	3	LIGHT-DUTY TRUCK (HISTORICAL DATA, PRE-98)
LDT2	4	LIGHT-DUTY TRUCK (HISTORICAL DATA PRE-98)
CAR	5	LIGHT-DUTY VEHICLE
MC	6	MOTORCYCLE
LDT	2	LIGHT-DUTY TRUCK (UNKWN SUBCLASS, PRE-98)
TRUCK	8	TRUCK
AGRIC	9	AGRICULTURAL EQUIPMENT
AIRPO	10	AIRPORT EQUIPMENT
COMME	11	COMMERCIAL EQUIPMENT
CONST	12	CONSTRUCTION AND MINING EQUIPMENT
INDUS	13	INDUSTRIAL EQUIPMENT
LAWNG	14	LAWN AND GARDEN EQUIPMENT(COM)
LOGGI	15	LOGGING EQUIPMENT
PLEAS	16	PLEASURE CRAFT
RAILR	17	RAILROAD EQUIPMENT
RECRE	18	RECREATIONAL EQUIPMENT
BUS	19	BUS

test_proc	test_pro_d
8M_C1	8 Mode, Steady State EPA Engine Certification Test
JAP13	Japanese 13 mode Engine Test
R49	European 13 Mode Engine Test
8MAVL	AVL 8 Mode Engine Test
UDDS	EPA Test Schedule for Heavy Duty Diesel Engines - Composite of Hot and Cold Start
UDDSH	EPA Test Schedule for Heavy Duty Diesel Engines - Hot Start Test

inj_pcat	inj_pcat_n	inj_pcat_d
R	1	Rotary
P	2	Pumpline nozzle
U	3	Unit
C	4	Common rail

inj_ctrl	inj_ctrl_n	inj_ctrl_d
ESSCE	1	Electrical steady state cruise enabled
ESSCD	2	Electrical steady state cruise disabled
M	3	Mechanical