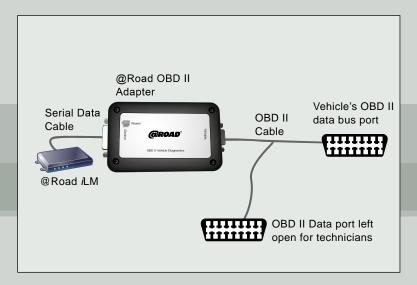
# @Road OBD II Vehicle Diagnostics

## Maximize the Efficiency of Your Fleet Operations

Fleet managers today need to run their operations with optimum efficiency, especially in the face of mission-critical challenges such as high fleet operations costs, recurring repairs and frequent vehicle downtime.

Designed for Class 1 to Class 5 light-duty vehicles, @Road OBD II Vehicle Diagnostics allows managers to remotely monitor vehicle performance, engine malfunctions and driver behavior to improve vehicle reliability and to reduce costs.



#### What is OBD II?

OBD II is a standard mandated by the Environmental Protection Agency (EPA) for emissions control of gasoline-powered vehicles. Developed by the Society of Automotive Engineers and adopted by the EPA and the California Air Resources Board, OBD II helps monitor parts of the chassis, body and accessory devices as well as the diagnostic control network of the car.

#### Experience the @Road Advantage

@Road OBD II Vehicle Diagnostics is an add-on feature to @Road GeoManager. It retrieves critical engine information from the vehicle's electronic control module and transmits this data through the @Road *i*LM. The manager or dispatcher can use this vehicle information to remotely monitor important

### Reduce Repair, Maintenance and Operating Costs

Core benefits of @Road OBD II Vehicle Diagnostics:

- Optimized vehicle use
- Proactive preventive maintenance
- Reduced maintenance and repair costs
- Decreased vehicle and driver downtime
- Minimized time spent on SMOG compliance
- Increased and improved customer service
- Scheduled and exceptions (real-time) reports
- Potentially reduced operating and insurance costs
- Maximized vehicle warranty

How @Road OBD II Vehicle
Diagnostics can help you keep your finger on the pulse of your fleet:

- Fault codes/fault description
- Driving time
- Idle duration
- Total trip duration
- Average speed
- Total stop count
- Start location
- End location
- Critical engine faults such as:
- Low oil pressure
- Very high coolant temperature
- Sustained excessive engine speed



engine parameters for proactive intervention and prevention of downtime. Critical data on engine faults such as low oil pressure, very high coolant temperature and sustained excessive engine speed can be derived from Trip Detail Reports or Trip Summary Reports. Reports are provided in a daily summary, or in real time according to customized exceptions.

Trip Detail Re	port										
Trip Detail Report from 9/1	3/05 12:00 A	H to 9/14/	05 11:59 8	**							
title.  This report will display the effice they display even if the entire trip class not fell within the report generation period.  E. includes clameter resolny is calculated from GSS.  E. includes clameter resolny is calculated from GSS.  E. The This Charles as a ranched of the exercise minute.											
Hobile Device : 4314         Date / Time	Diagnostics Fault Oescription (Fault Duration)	Driving Duration (mins)	Idle Duration (mins)	Trip Duration	Trip Distance (miles)	Start Odometer	End Odometer	Average Speed (MPII)	Stop Count	Start Location (Address/Co	
09/13/05 01:22:46 AM (EDT)		19	47	2H:06H	8.08	1759728	1759737	7.31	3	14280 SW 112TH S	
09/13/05 04:21:17 AM (EDT)		1	9	OH:10M	.0	1759727	1759737		0	9728 SW 122ND TE	
09/13/05 05:15:57 AM (BDT)		13	96	3HI50H	6.21	1759737	1759743	2.4	3	9726 SW 122ND TI	
09/13/05 07:22:17 AM (EDT)		1	16	0H:17H	- 0	1759743	1759743	0	1	14250 SW 112TH S	
09/13/05 08:03:57 AM (EDT)		35	25	0HI58H	12.43	1759743	1759756	12.85	1	14250 SW 1127H S	
09/13/05 09:10:28 AH (EDT)		43	102	2HI25H	14.91	1759758	1759770	6.19		13307 SW 58TH C	
09/13/05 11:41:38 AM (EDT)		19	19	OH:38H	9.94	1759770	1739780	15.56	1	15337 S DIXIE HII	
09/13/05 12:40:08 PH (EOT)		36	24	\$HI00H	14.91	1759790	1759795	14.87	3	14250 SW 112TH S	
09/13/05 01:43:19 PH (EOT)		20	21	OH:41H	9.32	1759795	1759605	13.58	1	10989 SW 40TH ST	
09/13/05 02:28:09 PH (EDT)		0	3	0H:04H	0.62	1759805	1759805	10.17	1	14250 SW 1127H S	
09/13/05 05:07:50 PM (EOT)		34	12	OH/36H	10:56	1759805	1759816	17.61	1	14250 SW 1127H S	
Day Total/Avg		211	372	9H(45H	26.92	1789728	1759016	8.93	23		
09/14/05 05:25:42 AM (EDT)		21	11	OH:32H	11:18	1759816	1759027	21.08	0	7637 SW 176TH S	
09/14/05 09:12:03 AM (EDT)			22	3H:28H	1.24	1759827	1759028	2.66	1.	14250 SW 1127H S	
09/14/03 09:55:13 AM (EDT)		16	198	4H:30H	40.39	1759828	1759869	8.37	12	11111 SW 134TH A	
08/34/05 02:57/24 PH (EDT)		4	- 2	OHIDAN	. 0	1759869	1759869	.0	0	14250 SW 1127H S	
Day Total/Avg		123	230	3H(34H	32.81	1759018	1759869	8.97	13		
Device Yotal/Avg		334	602	15H:39H	129.79	1759729	1755009	0.34	36		

Trip Detail Report shows vehicle data throughout the day.

e: 1. Trip events a		1 (0 9/12/05 )	1:59 PM							
	across days are shown on a g Non and Average Speed valu ation value is rounded off to	es are calculates		rio						
bile Device : 18	BUS TYPE: OBD-II	VIN: 270494								
Date	Diagnostics Fault Description (Fault Duration)	Driving Duration (mins)	Idle Duration (mins)	Trip Duration	Trip Distance (miles)	Start Odometer	End Odometer	Average Speed (MPH)	Stop	
9/09/05 (CDT)		164	217	6H:22M	142.92	2	145	22.51	9	
9/10/05 (CDT)	*	274	305	9H:37M	194.49	145	412	20.21	11	
9/11/05 (CDT)	2	228	178	6H:45H	143.54	412	584	21.27	21	
9/12/05 (CDT)	*	56	67	2H:03N	54.06	584	638	26.32	5	
evice Total/Avg	*	722	767	24H:47H	\$35.01	2	638	21:59	46	
9/11/05 (CDT) 9/12/05 (CDT)		228 56	178 67	6H:45M 2H:03M	143.54 54.06	412 584	584 638	21.27 26.32		

Trip Summary Report shows averages at the end of the day.

#### Maximize Potential, Minimize Costs

@Road OBD II Vehicle Diagnostics is a sophisticated efficiency maximizer for the savvy fleet manager. It enables one to set exacting standards to achieve efficient operations across the entire fleet, leading to cost savings and improved ROI.

For new and existing @Road GeoManager $_{\rm SM}$  customers, @Road OBD II Vehicle Diagnostics is a valuable addition to @Road's array of Asset Management solutions. For managers of heavy vehicles, @Road also provides @Road J1708 Vehicle Diagnostics.



@Road, Inc. is a global provider of on-demand software solutions designed to automate the management of mobile resources and to optimize the service delivery automation process for customers across a variety of industries.

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