

RoboCar Accidents 2017

2017 is likely the last year for which this report will be available. In 2017 Arizona recklessly opened its doors to on-road testing with no – absolutely 0 – regulatory requirements. As a result most major players, including the leader Waymo, have abandoned California – or any other state with sane reporting requirements. So going forward the data is simply not publicly available.

This year the US DOT also released its “Guidelines” for ADS (Autonomous Driving Systems) development. It is a pile of suggestions, with no requirements. So going forward we will also not be able to make any assumptions about what reporting capabilities will be in place.

In Brief

I offer the following conclusions regarding the summary results shown in the following pages.

- 1 Waymo technology continues to lead all players. And they are getting very close. For the year their disengagement rate is almost 1 every 6K miles. That is about twice per year for the average driver. And accident rates are only 4.2x worst than that for humans. Waymo technology may already be viable for level 4 in the highway environment under normal weather conditions.
- 2 GM Cruise (in second place) is really struggling. They significantly scaled up testing in 2017, and results have not fared well. By year end their disengagement interval was up, but still bouncing around between only 200 and 400 miles. The accident rate increased by 50% (168 times more than humans) over last year, so they are headed in the wrong direction.
- 3 There is a promising new-comer on the scene, Zoox. They just began testing in the fall of 2017. But disengagement progress is excellent (already at 430 miles), and initial accident rates are low. They are poised to pass GM-Cruise.

AZ governor invited all RoboCar companies in. Uber was first to jump. Within weeks this was the result. Uber test car on its side after accident. (Mar 27, 2017)



RoboCar Accidents

humans	date	type	time	test miles	rate /M miles	normalized to humans
					2.03	1.00
Google/Waymo						
2017				352,545	8.51	4.19
	<i>Bulk of testing moved to Arizona</i>					
3	08/26/17	disengage	08:39:00 AM			
2	04/19/17	side run off	06:59:00 PM			
1	03/26/17	rear end	04:50:00 PM			
2016				635,868	17.30	8.52
11	12/11/16	corner collision	11:36:00 AM			
10	10/26/16	rear end	10:27:00 AM			
9	09/23/16	T-bone	11:58:00 AM			
8	09/14/16	corner collision	03:06:00 PM			
7	09/07/16	rear end	06:47:00 PM			
6	09/02/16	rear end	10:41:00 AM			
5	08/16/16	rear end	PM			
4	08/08/16	rear end	PM			
3	07/15/16	rear end	03:26:00 PM			
2	04/28/17	side collision	05:35:00 PM			
1	02/04/17	side collision	PM			
2015				394,431	2.54	1.25
	<i>Restricted to local streets in Mt. View, max speed 25 mph</i>					
9	11/02/15	rear end	02:30:00 PM			
8	08/30/15	rear end	09:36:00 AM			
7	07/01/15	rear end	05:16:00 PM			
6	06/18/15	rear end	11:15:00 AM			
5	06/04/15	rear end	08:54:00 AM			
4	05/30/15	rear end	12:00:00 PM			
3	04/27/15	side collision	04:27:00 PM			
2	04/07/15	rear end	AM			
1	02/26/15	T-bone	AM	bad avoidance		

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humans	date	type	time	test miles	rate /M miles 2.03	normalized to humans 1.00
GM/Cruise						
2017				125,000	168.00	82.76
21	12/07/17	side collision	09:34:00 AM			
20	11/13/17	side collision	10:05:00 PM			
19	10/26/17	FS rear end	09:09:00 PM			
18	10/20/17	corner collision	09:16:00 AM			
17	10/18/17	corner collision	04:06:00 PM			
16	10/17/17	corner collision	05:41:00 PM			
15	10/16/17	corner collision	01:34:00 PM			
14	10/12/17	rear end	07:20:00 AM			
13	10/07/17	rear end	02:35:00 AM			
12	09/21/17	rear end	09:09:00 PM			
11	09/19/17	rear end	06:20:00 PM			
10	09/15/17	corner collision	11:20:00 PM			
9	07/06/17	corner collision	10:54:00 AM			
8	06/28/17	rear end	11:48:00 AM			
7	06/07/17	rear end	PM			
6	05/25/17	rear end	08:33:00 PM			
5	05/25/17	side collision	05:26:00 PM			
4	03/23/17	side collision	10:36:00 AM			
3	03/22/17	rear end	01:30:00 PM			
2	02/16/17	rear end	08:38:00 AM			
1	01/08/17	side collision	01:41:00 PM			
2016				9,730	102.78	50.63
1	01/08/16	head	01:14:00 PM			

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humans	date	type	time	test miles	rate /M miles 2.03	normalized to humans 1.00
<u>Zoox</u>						
2018						
1	01/18/18	rear end	<i>estimate</i> 09:43:00 AM	1,300	769.23	378.93
2017				2,244	0.00	0.00