



X-1R Global Ltd

To: All X-1R distributors From: Nigel (Mac) McKenzie

Cc: Date 8th July 2019

Subject: Increase of CVT fluids anti-shudder protection – JASO M349 Test

We have already garnered a lot of good anecdotal information about the ability of our CVT additive to rectify shuddering and sticky performance in cars with that type of transmission. However and as a part of our ongoing QC program we have recently contracted K.K.SVC Tokyo to conduct the JASO M349 Anti Shudder test on our CVT Treatment.

JASO, or Japanese Automotive Standards Organization, are very much at the pinnacle of automotive standards and have become one of the 'go-to' global organizations much in the same way that BSI and TUV are. Presently they are the only organization that currently have a standard test to determine the ability of a fluid to prevent shudder in a Continuously Variable Transmission.

We will be testing four fluids in total, Toyota, Nissan, Honda and Proton. Each test takes about 600 hours so the results will not be with us quickly. However the first results are with us and I am pleased to announce that our CVT fluid worked admirably well with the Toyota standard Toyota CVT oil. The report is attached but in summary at lower temperatures and slide speeds we were able to improve performance by more than 30%. However, at the higher range of temperature and sliding speeds we managed to extend the ability of the oil to resist shuddering by over 132 hours or more than 50%.

Thus we can claim that our product has the ability to improve the anti-shudder/service life of Toyota CVT fluid by more than 50%. AS and when the rest of the test are completed I will share these with you as well.

Nigel McKenzie

Attached report from K.K.SVC Tokyo



Test Results Report

Report No. 310757 and No.311934

FOR
X1R Global Limited

2. July 2019

Submitted by
K.K. SVC Tokyo
4052-2, Nakatsu, Aikawa-cho,
Aiko-gun, Kanagawa-ken
243-0303, JAPAN

1. Test method

LVFA Friction Test : JASO M349

2. Test sample code :

Toyota TC CVT (No Add)

Toyota TC CVT (with your additive)

3. Test results

Attached sheet

Submitted by : K.K. SVC Tokyo
Technical Service Center
Manager, Business Promotion Team



Atsushi Sugouchi

2. d μ /dV anti-shudder service life report

2.1 d μ /dV(0.3) result [Enter a value of d μ /dV (0.3) times 1000]

Fluid type		Toyota TC CVT(with your additive)		Toyota TC CVT(No add)	
Performance test temp		40°C	80°C	40°C	80°C
Cumulative total time of durability test	0 h	7.3	1.7	15.7	5.6
	24 h	16.2	16.1	23.0	24.8
	30 h	18.0	16.7	21.1	24.7
	36 h	19.5	17.6	21.8	23.1
	42 h	20.9	18.3	23.1	23.0
	48 h	21.1	16.4	23.1	22.6
	54 h	20.2	15.8	21.3	20.9
	60 h	19.2	13.8	19.8	21.0
	72 h	16.1	9.2	17.0	17.2
	84 h	13.8	2.4	14.6	-1.2
	96 h	10.9	2.1	10.0	-2.2
	108 h	7.5	1.8	5.5	-4.5
	120 h	7.6	-12.8	4.0	-7.9
	144 h	5.3	-20.9	-0.3	-17.5
	168 h	2.8	-26.7	-2.3	-23.4
	192 h	1.6	-31.4	-8.2	-32.8
	216 h	0.9	-35.4	-6.0	-8.9
	240 h	-0.5	-40.2	-6.7	-13.8
264 h	-1.3	-39.8	-5.5	-31.9	
288 h	-2.7	-45.9			
300 h	-4.5	-48.7			

2.2 d μ /dV(0.9) result [Enter a value of d μ /dV (0.9) times 1000]

Fluid type		Toyota TC CVT(with your additive)		Toyota TC CVT(No add)	
Performance test temp		40°C	80°C	40°C	80°C
Cumulative total time of durability test	0 h	3.2	1.0	5.5	0.8
	24 h	8.0	3.3	8.6	5.6
	30 h	8.9	4.0	7.7	5.2
	36 h	10.2	4.7	8.2	5.8
	42 h	10.7	5.2	9.6	6.3
	48 h	11.4	5.3	10.2	5.9
	54 h	11.8	5.0	9.2	5.7
	60 h	12.1	4.8	8.9	5.4
	72 h	13.1	4.7	9.9	4.8
	84 h	13.1	3.8	10.4	4.3
	96 h	13.2	3.4	11.0	3.9
	108 h	14.0	3.1	11.8	2.6
	120 h	13.6	2.4	13.0	2.8
	144 h	15.3	3.3	13.4	-1.6
	168 h	16.1	2.5	-10.7	-3.1
	192 h	16.1	2.3	-12.4	-4.8
	216 h	16.5	1.5	-13.6	-7.3
	240 h	17.6	1.3	-15.9	-13.1
264 h	17.8	0.4	-17.3	-14.0	
288 h	23.2	1.9			
300 h	24.1	2.3			

3. Anti-shudder service life $d \mu / dV$

3.1 Anti-Shudder service life $d \mu / dV$ (0.3)

$d \mu / dV$ value specified by the parties concerned, s/mX1000		
Toyota TC CVT (with your additive)	40°C	240 h
	80°C	120 h
Toyota TC CVT (No add)	40°C	144 h
	80°C	108 h

3.2 Anti-Shudder service life $d \mu / dV$ (0.9)

$d \mu / dV$ value specified by the parties concerned, s/mX1000		
Toyota TC CVT (with your additive)	40°C	(300h Over)
	80°C	(300h Over)
Toyota TC CVT (No add)	40°C	168 h
	80°C	144 h