


This MotoCAP safety rating applies to:

Brand:	Harley Davidson
Model:	Alyssa 3 in 1
Type:	Jacket - Leather
Date purchased:	23 May 2019
Sizes tested:	XL
Gender:	F
Style:	Cruiser
Test code:	J19L20

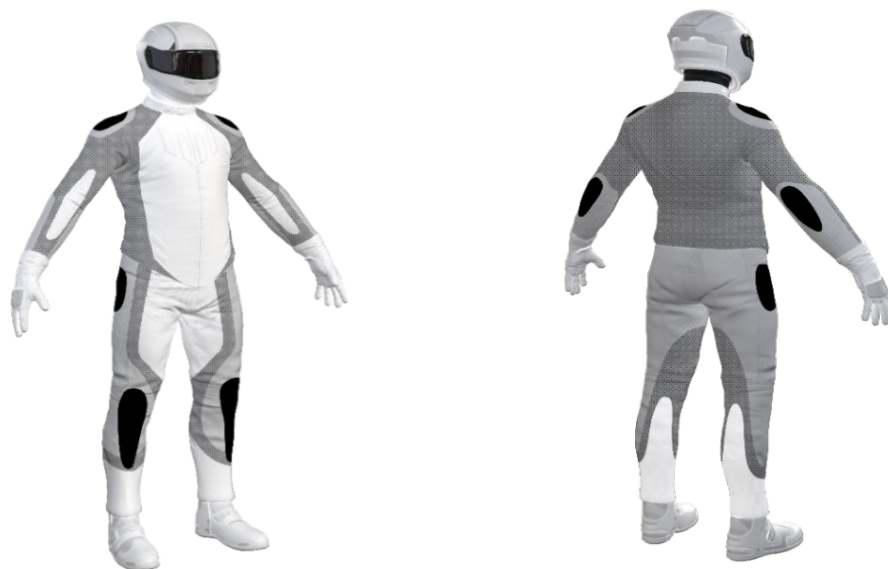
Test Results Summary:

	Rating	Score
MotoCAP Protection Rating	★	19.6
Abrasion	2/10	1.83
Burst	10/10	1046
Impact	1/10	0.0
MotoCAP Comfort Rating	★★	0.292
Moisture Vapour Resistance		50.4
Thermal Resistance		0.245
Water resistance	N/A	N/A

This garment is not fitted with impact protectors. Pockets are provided at the elbows, shoulders and back for aftermarket impact protectors. Vents are located on either side of the front and on either side of the back to allow airflow cooling in hot weather. The thermal comfort rating is based on tests of the breathability of the garment when all vents are closed. The thermal comfort of this product may be better when the vents can be opened.

Jacket and Pants - Crash Impact Risk Zones

This diagram is a pictorial representation of the crash impact risk Zones.


Zone 1


High risk of abrasion
High risk of impact

Zone 2


High risk of abrasion

Zone 3


Medium risk of abrasion

Zone 4


Low risk of abrasion

Abrasion Resistance

The garment was tested for abrasion resistance in accordance with MotoCAP test protocols. The table below shows the test results for time to abrade through all layers of the materials. Calculated for each sample by Zone, type and area coverage of each material as a proportion of that Zone.

Details of materials used in garment:

Material A:	Leather shell, foam layer and mesh inner liner
Material B:	Leather shell with mesh inner liner

Zone	Coverage (%)	Abrasion time for each test (seconds)						Average (seconds)	
		1	2	3	4	5	6		
Zone 1 and 2 areas (High abrasion risk)									
Material A	55%	6.18	10.71	5.18	8.85	14.41	3.82	8.19	G
Material B	45%	2.22	1.61	1.58	0.95	2.62	1.23	1.70	M
Zone 3 area (Medium abrasion risk)									
Material B	100%	2.22	1.61	1.58	0.95	2.62	1.23	1.70	M
Zone 4 area (Low abrasion risk)									
Material B	100%	2.22	1.61	1.58	0.95	2.62	1.23	1.70	G

Abrasion times are capped at a maximum of 10.00s.

The diagram below is a visual indication of the likely abrasion performance of the materials in each zone calculated from the data in the table above. The colour coding is based on the worst performing material in each zone.



Determining Criteria		Good	Acceptable	Marginal	Poor
					
High abrasion risk	Zone 1/2:	> 5.6	3.0 - 5.6	1.3 - 2.9	< 1.3
Medium abrasion risk	Zone 3:	> 2.5	1.8 - 2.5	0.8 - 1.7	< 0.8
Low abrasion risk	Zone 4:	>1.5	1.0 - 1.5	0.4 - 0.9	< 0.4

Burst Strength

The garment's burst strength was tested in accordance with MotoCAP test protocols. The table below shows the burst pressure in kilopascals (kPa) for each sample tested by Zone and the average result for each zone.

Burst pressure (kPa)

Area	1	2	3	4	5	Average	
Zones 1 & 2	859	1907	686	1237	936	1125	G
Zone EZ	862	1355	1252	1102	880	1090	G
Zones 3 & 4	949	740	547	691	1075	800	A

The diagram below illustrates the burst strength results in terms of the likely performance of the garment in an impact and is a pictorial representation of the data from the table above.



Determining Criteria

Burst strength

	Good	Acceptable	Marginal	Poor
(kPa)	> 1000	800 - 1000	500 - 799	< 500

Impact Protection

This garment was not tested for impact protection as impact protectors were not provided with the garment. The table below shows the test results for each strike on each impact protector in kilonewtons (kN) and their area of coverage as a proportion (%) of the Zone.

Impact protector type	Elbow			Shoulder		
Average force (kN)			P			P
Maximum force (kN)			P			P
Coverage of zone 1 area		0%			0%	
Coverage of zone after displacement		0%			0%	
Individual test results						
Impact force (kN)	No impact protector present			No impact protector present		
Strike location	Elbow A	B	C	Shoulder A	B	C
Impact Protector 1						
Impact Protector 2						
Impact Protector 3						

The diagram below is a visual indication of the likely performance of each impact protector calculated from the data in the table above. The colour coding is based on the worst performing score for average or maximum force for each impact zone.



Determining Criteria		Good	Acceptable	Marginal	Poor*
Impact force	(kN)	< 15	15 - 24	25 - 30	> 30

* Poor may also indicate that no impact protector, or impact protector pocket is present in the garment

Areas shaded black are not considered in the impact protection ratings.

Thermal comfort

The garment was tested for thermal comfort following the MotoCAP test protocols. The table below shows the moisture vapour resistance and the thermal resistance values obtained.

	1	2	Average
Moisture Vapour Resistance - R_{et} (kPam ² /W)	49.6	51.1	50.4

	1	2	Average
Thermal Resistance - R_{ct} (Km ² /W)	0.212	0.278	0.245

Water spray and rain resistance

This garment has not been advertised as water resistant so has not been tested for water spray and rain resistance.