This MotoCAP safety rating applies to:

Brand:	Harley Davidson
Model:	Synthesis Pocket System
Type:	Jacket - Leather
Date purchased:	26 August 2019
Sizes tested:	L and XL
Gender:	M
Style:	Cruiser
Test code:	J19L25

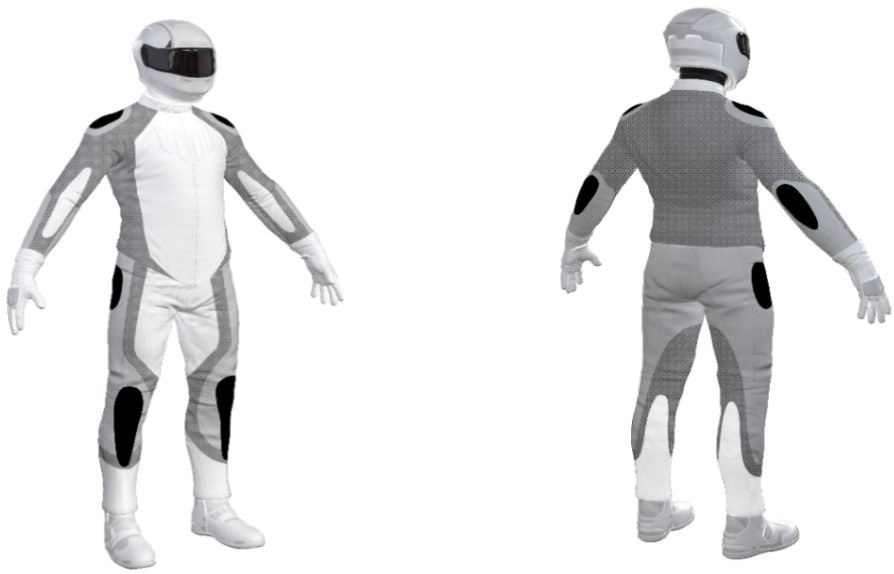
Test Results Summary:

	Rating	Score
MotoCAP Protection Rating	★★	29.1
Abrasion	4/10	3.35
Burst	10/10	1236
Impact	1/10	0.0
MotoCAP Comfort Rating	★	0.121
Moisture Vapour Resistance		131.7
Thermal Resistance		0.267
Water resistance	N/A	N/A

This garment is not fitted with impact protectors. Pockets are provided at the elbows and shoulders for aftermarket impact protectors. Vents are provided on the sides and back to allow airflow movement through the garment. 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	Zone 2	Zone 3	Zone 4
High risk of abrasion High risk of impact	High risk of abrasion	Medium risk of abrasion	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 with mesh inner liner

Zone	Coverage (%)	Abrasion time for each test (seconds) 1	2	3	4	5	6	Average (seconds)	
Zone 1 and 2 areas (High abrasion risk)									
Material A	100%	3.78	3.25	3.23	4.94	2.56	2.36	3.35	A
Zone 3 area (Medium abrasion risk)									
Material A	100%	3.78	3.25	3.23	4.94	2.56	2.36	3.35	G
Zone 4 area (Low abrasion risk)									
Material A	100%	3.78	3.25	3.23	4.94	2.56	2.36	3.35	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	1122	1800	1334	1544	1084	1377	G
Zone EZ	984	748	1426	1258	1393	1162	G
Zones 3 & 4	1656	927	913	728	1303	1105	G

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		Good	Acceptable	Marginal	Poor
Burst strength	(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)	Elbow	No impact protector present		Shoulder	No impact protector present	
Strike location	**A**	**B**	**C**	**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 maximium 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} ($kPam^2/W$)	132.5	131.0	131.7

	1	2	**Average**
Thermal Resistance - R_{ct} (Km^2/W)	0.264	0.270	0.267

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.

Assessment Details.

Brand	Harley Davidson
Model	Synthesis Pocket System
Type	Jacket - Leather
Date purchased	26 August 2019
Tested by	AMCAF, Deakin University
Garment test reference	J19L25
Rating first published	November 2019
Rating updated	1 October 2021