This MotoCAP safety rating applies to:

Brand:	Harley Davidson
Model:	Command
Type:	Jacket - Leather
Date purchased:	20 January 2019
Sizes tested:	L
Gender:	M
Style:	Cruiser
Test code:	J19L04

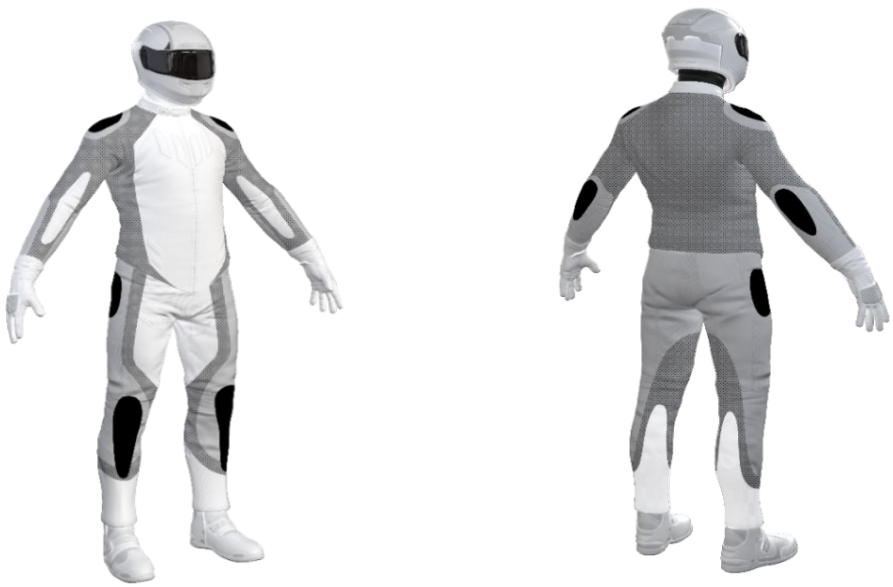
Test Results Summary:

	Rating	Score
MotoCAP Protection Rating	★	20.3
Abrasion	3/10	2.53
Burst	7/10	766
Impact	1/10	0.0
MotoCAP Comfort Rating	★★	0.378
Moisture Vapour Resistance		50.4
Thermal Resistance		0.317
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. There are two perforated pin stripes along each arm along with vents at the elbows and on the side seams to allow airflow cooling in hot weather. The thermal comfort measurements undertaken have not evaluated the performance of venting provided in this garment. 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 and mesh inner liner
Material B:	Perforated leather shell and 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	70%	2.72	2.16	3.31	2.68	2.55	1.76	2.53	M
Material B	30%	Perforated strip was too narrow for test sample collection.							
Zone 3 area (Medium abrasion risk)									
Material A	100%	2.72	2.16	3.31	2.68	2.55	1.76	2.53	G
Zone 4 area (Low abrasion risk)									
Material A	100%	2.72	2.16	3.31	2.68	2.55	1.76	2.53	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	699	720	781	343	1063	721	M
Zone EZ	738	806	876	683	659	752	M
Zones 3 & 4	526	858	1339	901	781	881	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		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} ($kPam^2/W$)	51.7	49.1	50.4

	1	2	**Average**
Thermal Resistance - R_{ct} (Km^2/W)	0.328	0.306	0.317

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.