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TECHNOLOGY ASSESSMENT PROGRAM INFORMATION CENTER

CONSUMER PRODUCT LIST

Metallic Handcuff Testing Report

February 1986

In May 1982, the Technology Assessment Program Information Center (TAPIC) of the National Institute of Justice published the Metallic Handcuff Testing Report. This report presented results on tests conducted on 17 models of double-locking metallic handcuffs. The handcuffs were tested against NIJ Standard 0307.01 for Metallic Handcuffs.

To meet the requirements of the Standard, a sample of five handcuffs were selected at random for each of the 17 models tested. Four or more of the five samples were required to pass all of the tests.

The Standard specified that the handcuffs conform to a number of requirements including markings, workmanship, weight, dimensions, mechanical strength, salt spray corrosion resistance, and cheek plate tamper resistance. Of the original 17 models tested in 1982 only five complied with the requirements of the Standard, although they may not have contained the required model number. They are: Peerless 10 ounce and Smith and Wesson models 90, 91, 94, and 938.

One additional model, the Federal Laboratories Federal Super, passed the mechanical requirements but did not have the required serial number.

Since the 1982 report was published, three additional models have been tested and found to comply with the Standard. These additional models are the Hiatt Model 2010 Snap-on, which fully complied with the Standard including the model number, and the Peerless Hinged-Black Oxide Finish and Hinged-Nickel Finish, which may not have had the model number.

This Consumer Product List (CPL) includes the manufacturers and models of all handcuffs tested and found to comply with the NIJ Standard as of January 1986.

If you have any questions concerning this Consumer Product List, are interested in the results of specific tests, or need information on other equipment standards or tests, call the Technology Assessment Program Information Center toll free at 1-800-24-TAPIC. In Maryland and Metropolitan Washington, D.C., call (301) 251-5060.

METALLIC HANDCUFF TEST RESULTS

BRAND NAME/MANUFACTURER: Smith & Wesson

ADDRESS: 2100 Roosevelt Ave., Springfield, MA 01101

MODEL NUMBER: 94

HANDCUFF PERFORMANCE REQUIREMENTS AND NIJ-STANDARD-0307.01 PARAGRAPH REFERENCE NUMBERS		SERIAL NUMBER:	755716	757453	755203	800912	898073
		SAMPLE NUMBER:	2307	2308	2306	2310	2309
4.3 MARKINGS:	Manufacturer's name or trade mark		P	P	P	P	P
	Serial number		P	P	P	P	P
4.5 WEIGHT:	Shall not exceed 15 oz.		11.1	11.2	11.2	11.2	11.2
4.6 DIMENSIONS:	Minimum opening - 2.0 inches		2.0	2.0	2.0	2.0	2.0
	Minimum inside perimeter at first notch - 7.9 inches		8.2	8.3	8.2	8.1	8.2
	Maximum inside perimeter at last notch - 6.5 inches		5.8	5.9	5.9	5.8	6.0
	Maximum overall length - 9.4 inches		9.4	9.4	9.4	9.4	9.3
4.7 MECHANICAL STRENGTH:	Handcuffs shall withstand a tensile force of 495 lbs.		F ¹	P	P	P	P
	Locking mechanism shall withstand a tensile force of 495 lbs.	(R)	P	P	P	P	P
		(L)	P	P	P	P	P
4.8 CHEEK PLATE TAMPER RESISTANCE:	Following test in which the cheek plate is subjected to a maximum torque of 204 inch pounds, the cuff must still provide restraint.	(R)	P	P ²	P	P	P
		(L)	P	P	P	P ²	P
4.10 SALT SPRAY CORROSION RESISTANCE:	Shall show no evidence of corrosion of basic metal or coating		P ³	P ³	P ³	P ³	P ³

NOTES:

1. Ratchet separated from pawl under load.
2. Ratchet binding in cheek plates due to deformation; retains locking ability.
3. Slight exterior corrosion easily cleaned.

METALLIC HANDCUFF TEST RESULTS

BRAND NAME/MANUFACTURER: Smith & Wesson

ADDRESS: 2100 Roosevelt Ave., Springfield, MA 01101

MODEL NUMBER: 90

HANDCUFF PERFORMANCE REQUIREMENTS AND NIJ-STANDARD-0307.01 PARAGRAPH REFERENCE NUMBERS		SERIAL NUMBER:	273292	260805	279858	281795	279548
		SAMPLE NUMBER:	2273	2274	2275	2277	2278
4.3 MARKINGS:	Manufacturer's name or trade mark		P	P	P	P	P
	Serial number		P	P	P	P	P
4.5 WEIGHT:	Shall not exceed 15 oz.		9.3	9.4	9.2	9.4	9.5
4.6 DIMENSIONS:	Minimum opening - 2.0 inches		2.0	2.0	2.0	2.5	2.0
	Minimum inside perimeter at first notch - 7.9 inches		8.3	8.3	8.4	8.4	8.4
	Maximum inside perimeter at last notch - 6.5 inches		5.9	5.9	5.9	5.9	5.9
	Maximum overall length - 9.4 inches		8.9	9.0	8.9	8.8	8.9
4.7 MECHANICAL STRENGTH:	Handcuffs shall withstand a tensile force of 495 lbs.		P	P	P	P	P
	Locking mechanism shall withstand a tensile force of 495 lbs.	(R)	P	P	P	P	P
		(L)	P	P	P	P	P
4.8 CHEEK PLATE TAMPER RESISTANCE:	Following test in which the cheek plate is subjected to a maximum torque of 204 inch pounds, the cuff must still provide restraint.	(R)	P	P	P	P	P
		(L)	P	P	P	P	P
4.10 SALT SPRAY CORROSION RESISTANCE:	Shall show no evidence of corrosion of basic metal or coating		P ¹	P ¹	P ¹	P ¹	P ¹

NOTES:

1. Slight exterior corrosion easily cleaned.

METALLIC HANDCUFF TEST RESULTS

BRAND NAME/MANUFACTURER: Smith & Wesson

ADDRESS: 2100 Roosevelt Ave., Springfield, MA 01101

MODEL NUMBER: 91

HANDCUFF PERFORMANCE REQUIREMENTS AND NIJ-STANDARD-0307.01 PARAGRAPH REFERENCE NUMBERS		SERIAL NUMBER:	013123	013124	012999	012998	013098
		SAMPLE NUMBER:	2320	2322	2318	2319	2321
4.3 MARKINGS:	Manufacturer's name or trade mark		P	P	P	P	P
	Serial number		P	P	P	P	P
4.5 WEIGHT:	Shall not exceed 15 oz.		8.8	8.9	9.1	8.9	9.2
4.6 DIMENSIONS:	Minimum opening - 2.0 inches		2.1	2.0	2.0	2.0	2.0
	Minimum inside perimeter at first notch - 7.9 inches		8.4	8.4	8.3	8.3	8.3
	Maximum inside perimeter at last notch - 6.5 inches		5.9	5.9	6.0	6.0	6.0
	Maximum overall length - 9.4 inches		9.0	8.9	8.9	9.0	8.9
4.7 MECHANICAL STRENGTH:	Handcuffs shall withstand a tensile force of 495 lbs.		P ¹	P ¹	P ¹	P ¹	P ¹
	Locking mechanism shall withstand a tensile force of 495 lbs.	(R)	P	P	P	P	P ²
		(L)	P	P	P ²	P	P
4.8 CHEEK PLATE TAMPER RESISTANCE:	Following test in which the cheek plate is subjected to a maximum torque of 204 inch pounds, the cuff must still provide restraint.	(R)	P ³	P	P ³	P ³	P ⁴
		(L)	P ³	P	P	P ⁴	P ⁴
4.10 SALT SPRAY CORROSION RESISTANCE:	Shall show no evidence of corrosion of basic metal or coating		P ⁵	P ⁵	P ⁵	P ⁵	P ⁵

NOTES:

1. Binding not as severe after tensile testing. Previous binding was caused by salt spray corrosion test.
2. Binds after tensile test.
3. Binds, but still locks.
4. Will not unlock.
5. Slight exterior corrosion easily cleaned; moderate to heavy interior corrosion of locking mechanism.

METALLIC HANDCUFF TEST RESULTS

BRAND NAME/MANUFACTURER: Smith & Wesson

ADDRESS: 2100 Roosevelt Ave., Springfield, MA 01101

MODEL NUMBER: 938

HANDCUFF PERFORMANCE REQUIREMENTS AND NIJ-STANDARD-0307.01 PARAGRAPH REFERENCE NUMBERS		SERIAL NUMBER:	869591	965019	869467	869510	869884
		SAMPLE NUMBER:	2328	2324	2326	2325	2327
4.3 MARKINGS:	Manufacturer's name or trade mark		P	P	P	P	P
	Serial number		P	P	P	P	P
4.5 WEIGHT:	Shall not exceed 15 oz.		7.8	8.0	8.0	8.2	8.1
4.6 DIMENSIONS:	Minimum opening - 2.0 inches		2.2	2.1	2.1	2.0	2.0
	Minimum inside perimeter at first notch - 7.9 inches		8.2	8.2	8.2	8.2	8.2
	Maximum inside perimeter at last notch - 6.5 inches		6.2	6.0	5.8	5.7	5.8
	Maximum overall length - 9.4 inches		8.7	8.7	8.7	8.8	8.8
4.7 MECHANICAL STRENGTH:	Handcuffs shall withstand a tensile force of 495 lbs.		P	P	P	P	P ¹
	Locking mechanism shall withstand a tensile force of 495 lbs.	(R)	P	P	P	P	P ¹
		(L)	P	P	P	P	P
4.8 CHEEK PLATE TAMPER RESISTANCE:	Following test in which the cheek plate is subjected to a maximum torque of 204 inch pounds, the cuff must still provide restraint.	(R)	P	P	P	P	P ²
		(L)	P	P	P	P	P ³
4.10 SALT SPRAY CORROSION RESISTANCE:	Shall show no evidence of corrosion of basic metal or coating		P ⁴	P ⁴	P ⁴	P ⁴	P ⁴

NOTES:

1. Right cuff binds but still locks.
2. Right cuff still binding.
3. Left cuff binds but still locks.
4. Slight exterior corrosion easily cleaned.

METALLIC HANDCUFF TEST RESULTS

BRAND NAME/MANUFACTURER: Peerless Handcuff Company

ADDRESS: 95 State Street, Springfield, MA 01103

MODEL NUMBER: Hinged-Nickel Finish

HANDCUFF PERFORMANCE REQUIREMENTS AND NIJ-STANDARD-0307.01 PARAGRAPH REFERENCE NUMBERS		SERIAL NUMBER:	1474	1473	1472	1468	1467
		SAMPLE NUMBER:	2393	2394	2395	2396	2397
4.3 MARKINGS:	Manufacturer's name or trade mark		P	P	P	P	P
	Serial number		P	P	P	P	P
4.5 WEIGHT:	Shall not exceed 15 oz.		12.0	12.0	11.9	11.9	12.0
4.6 DIMENSIONS:	Minimum opening - 2.0 inches		2.2	2.2	2.2	2.2	2.2
	Minimum inside perimeter at first notch - 7.9 inches		9.1	9.0	9.1	9.1	9.1
	Maximum inside perimeter at last notch - 6.5 inches		6.4	6.4	6.4	6.4	6.4
	Maximum overall length - 9.4 inches		8.5	8.5	8.5	8.5	8.5
4.7 MECHANICAL STRENGTH:	Handcuffs shall withstand a tensile force of 495 lbs.		P	P	P	P	P
	Locking mechanism shall withstand a tensile force of 495 lbs.	(R)	P	P	P	P	P
		(L)	P	P	P	P	P
4.8 CHEEK PLATE TAMPER RESISTANCE:	Following test in which the cheek plate is subjected to a maximum torque of 204 inch pounds, the cuff must still provide restraint.	(R)	P	P	P	P	P
		(L)	P	P	P	P	P
4.10 SALT SPRAY CORROSION RESISTANCE:	Shall show no evidence of corrosion of basic metal or coating		P ¹	P ¹	P ¹	P ¹	P ¹
NOTES: 1. Slight exterior rust easily cleaned.							

METALLIC HANDCUFF TEST RESULTS

BRAND NAME/MANUFACTURER: Peerless Handcuff Company

ADDRESS: 95 State Street, Springfield, MA 01103

MODEL NUMBER: Hinged-Black Oxide Finish

HANDCUFF PERFORMANCE REQUIREMENTS AND NIJ-STANDARD-0307.01 PARAGRAPH REFERENCE NUMBERS		SERIAL NUMBER:	1818	1800	1799	1796	1787
		SAMPLE NUMBER:	2388	2389	2390	2391	2392
4.3 MARKINGS:	Manufacturer's name or trade mark		P	P	P	P	P
	Serial number		P	P	P	P	P
4.5 WEIGHT:	Shall not exceed 15 oz.		11.9	11.9	11.8	11.9	11.9
4.6 DIMENSIONS:	Minimum opening - 2.0 inches		2.2	2.2	2.2	2.2	2.2
	Minimum inside perimeter at first notch - 7.9 inches		9.1	9.1	9.1	9.1	9.1
	Maximum inside perimeter at last notch - 6.5 inches		6.4	6.4	6.4	6.4	6.4
	Maximum overall length - 9.4 inches		8.5	8.5	8.5	8.5	8.5
4.7 MECHANICAL STRENGTH:	Handcuffs shall withstand a tensile force of 495 lbs.		P	P	P	P	P
	Locking mechanism shall withstand a tensile force of 495 lbs.	(R)	P	P	P	P	P
		(L)	P	P	P	P	P
4.8 CHEEK PLATE TAMPER RESISTANCE:	Following test in which the cheek plate is subjected to a maximum torque of 204 inch pounds, the cuff must still provide restraint.	(R)	P	P	P	P	P
		(L)	P	P	P	P	P
4.10 SALT SPRAY CORROSION RESISTANCE:	Shall show no evidence of corrosion of basic metal or coating		P ¹	P ¹	P ¹	P ¹	P ¹

NOTES:

1. Very heavy red rust was noticed on the test sample.

METALLIC HANDCUFF TEST RESULTS

BRAND NAME/MANUFACTURER: Peerless Handcuff Company

ADDRESS: 95 State Street, Springfield, MA 01103

MODEL NUMBER: Peerless 10 oz.

HANDCUFF PERFORMANCE REQUIREMENTS AND NIJ-STANDARD-0307.01 PARAGRAPH REFERENCE NUMBERS		SERIAL NUMBER:	930350	930354	930355	930353	930352
		SAMPLE NUMBER:	2250	2251	2252	2253	2254
4.3 MARKINGS:	Manufacturer's name or trade mark		P	P	P	P	P
	Serial number		P	P	P	P	P
4.5 WEIGHT:	Shall not exceed 15 oz.		9.6	9.5	9.5	9.5	9.5
4.6 DIMENSIONS:	Minimum opening - 2.0 inches		2.0	2.1	2.0	2.0	2.0
	Minimum inside perimeter at first notch - 7.9 inches		8.3	8.3	8.3	8.3	8.3
	Maximum inside perimeter at last notch - 6.5 inches		5.9	5.9	5.9	5.9	5.9
	Maximum overall length - 9.4 inches		9.3	9.3	9.4	9.4	9.4
4.7 MECHANICAL STRENGTH:	Handcuffs shall withstand a tensile force of 495 lbs.		P	P	P	P	P
	Locking mechanism shall withstand a tensile force of 495 lbs.	(R)	P	P	P ¹	P ²	P
		(L)	P	F ³	P ¹	P	P
4.8 CHEEK PLATE TAMPER RESISTANCE:	Following test in which the cheek plate is subjected to a maximum torque of 204 inch pounds, the cuff must still provide restraint.	(R)	P	P	P	P	P
		(L)	P	P	P	P	P
4.10 SALT SPRAY CORROSION RESISTANCE:	Shall show no evidence of corrosion of basic metal or coating		P ⁴	P ⁴	P ⁴	P ⁴	P ⁴

NOTES:

1. Binding but still double locks.
2. Difficult to double lock right cuff.
3. Will not double lock.
4. Slight exterior corrosion easily cleaned.

METALLIC HANDCUFF TEST RESULTS

BRAND NAME/MANUFACTURER: The Thompson Corporation

ADDRESS: P.O. Box 306, River Forest, IL 60305

MODEL NUMBER: 2010 Hiatt Snap-On

HANDCUFF PERFORMANCE REQUIREMENTS AND NIJ-STANDARD-0307.01 PARAGRAPH REFERENCE NUMBERS		SERIAL NUMBER:	NR ¹	NR ¹	NR ¹	NR ¹	NR ¹
		SAMPLE NUMBER:	1	2	3	4	5
4.3 MARKINGS:	Manufacturer's name or trade mark		P	P	P	P	P
	Serial number		P	P	P	P	P
4.5 WEIGHT:	Shall not exceed 15 oz.		9.5	9.5	9.5	9.5	9.5
4.6 DIMENSIONS:	Minimum opening - 2.0 inches		2.05	2.05	2.05	2.05	2.05
	Minimum inside perimeter at first notch - 7.9 inches		8.25	8.25	8.25	8.25	8.25
	Maximum inside perimeter at last notch - 6.5 inches		5.8	5.8	5.8	5.8	5.8
	Maximum overall length - 9.4 inches		8.75	8.75	8.75	8.75	8.75
4.7 MECHANICAL STRENGTH:	Handcuffs shall withstand a tensile force of 495 lbs.		P	P	P	P	P
	Locking mechanism shall withstand a tensile force of 495 lbs.	(R)	P	P	P	P	P
		(L)	P	P	P	P	P
4.8 CHEEK PLATE TAMPER RESISTANCE:	Following test in which the cheek plate is subjected to a maximum torque of 204 inch pounds, the cuff must still provide restraint.	(R)	P	P	P	P	P
		(L)	P	P	P	P	P
4.10 SALT SPRAY CORROSION RESISTANCE:	Shall show no evidence of corrosion of basic metal or coating		P	P	P	P	P

NOTES:

1. Not recorded.