



DEPARTMENT OF THE AIR FORCE  
AIR FORCE LIFE CYCLE MANAGEMENT CENTER  
WRIGHT-PATTERSON AIR FORCE BASE OHIO

29 July 2019

MEMORANDUM FOR RECORD

FROM: AFLCMC/WNU - TAC

SUBJECT: Glove Certification Safe-to-Fly List

1. The COTS government gloves on this list have been extensively tested to AF aircrew requirements. They are designated Safe-to-Fly and authorized to be individually procured (e.g. AAFES, manufacturer website, distributors, etc., and/or by National Stock Number through the Defense Logistics Agency). COTS gloves may not conform to uniform color standards per AFI 36-2903. However, as a rule, gloves worn during flying operations are not considered uniform items. Gloves worn outside of flying operations are required to meet requirements of AFI 36-2903. MAJCOMs shall provide guidance on glove color wear policy for the COTS gloves listed herein.
2. Glove Cold Protection from Frostbite and Dexterity Matrix.
3. It is important for aircrew to understand the salient characteristics and tradeoffs between different glove types. The Air Force conducted Flame Resistance, Shrinkage, Thermal Protection, Abrasion Resistance, Touchscreen Performance and Dimensional Stability tests. All gloves listed in this certification exceeded qualification requirements. Further, Limited User Integration was conducted with aircrew personnel representing a variety of MDSs. The chart above was developed as a method to inform aircrews of glove performance attributes, and serves as a method to determine the best practical glove for any mission profile. Not all gloves will provide the same tactility as the legacy Summer Flyer's glove. Therefore, it is incumbent upon the local Aircrew Flight Equipment Officer to evaluate all newly issued AFE clothing (boots, gloves, etc.) for mission effectiveness in assigned aircraft, update operational and training procedures, and ensure using aircrew are appropriately trained, IAW AFI 11-301, paragraphs 2.9.16 and 2.11. Basic familiarization and hazards of items will be briefed during the appropriate "LL" course, e.g., LL01 *Aircrew Flight Equipment Familiarization* and/or LL02/LL03 *Emergency Egress*. Different aircrew positions, with differing tasks, often require more than one type of glove. For example, aircrew may choose one glove for outside the aircraft to protect against the cold and another for duties within the aircraft where greater dexterity is required. Where dexterity/tactility is required, bulky gloves, that hinder task completion, should not be used.
4. The Touchscreen (TS) gloves listed have the TS capability processed into the leathers during the leather manufacturing process. Alternate methods, including "Paint-On," "Particle embedding," and other after-tanning processes applied to the glove leathers are currently not sufficient for military aircrew needs and shall not be used. None of the TS gloves on this list fall into this category. All have been extensively tested and are qualified Safe-to-Fly for AF aircrew.

# AF Glove Cold Protection from Frostbite and Dexterity Matrix

Glove Type	Cold Weather Gloves				Rugged Use Wear			Summer Flyers Like			
	*Masley	*LoF Fly-By	*HAU-15/P	MASSIF Locator	Army Combat TS Flyer	Wiley-X Orion	*Overwatch	LoF Sortie	Summer Flyers	HWT	HWT Digital
> 70°F									X		X
32°F to 70°F				X	X	X	X	X			
-20°F to 32°F	X (up to 21 hrs)	X (up to 21 hrs)	X (up to 20 hrs)	X (up to 3 hrs)	N/A	N/A	X (up to 3 hrs)	N/A	N/A	N/A	N/A
-32°F to -20°F	X (up to 16 hrs)	X (up to 15 hrs)	X (up to 15 hrs)	X (Up to 1 hr.)	N/A	N/A	X (Up to 1 hr.)	N/A	N/A	N/A	N/A
-49°F to -20°F	X (up to 3 hrs)	X (up to 2.9 hrs)	X (up to 2 hrs)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
*Note: Temperatures and durations noted above are applicable when wearing the complete Cold Weather Aviation System (CWAS) ensemble.											
DEXTERITY	Masley	LOF Fly-By	HAU-15/P	MASSIF Locator	Army Combat TS Flyer	Wiley-X Orion	Overwatch	LoF Sortie	GS/FRP-2	HWT	HWT Digital
Great (fine manipulation)									X	X	X
Good				X	X	X	X	X			
OK											
Poor (no fine manipulation)	X	X	X								
Touchscreen (TS) Capable	X	X		X	X	X	X	X		X	X

N/A = Not Applicable

Reference AF AFLCMC/WNU StF Memo dated 1 July 2019

5. The following Commercial Off the Shelf (COTS) gloves listed below conform to Air Force Safe-to-Fly requirements:

<u>Vendor/Glove (Alphabetical Order)</u>	<u>Description</u>	<u>Color</u>
Army Combat TS Flyer Glove Long Gauntlet LGTSCG-400XX (Where XX = SM, MD, LG, XL, or XXL)	Some Warmth Good Dexterity Water Resistant Temperate Weather Use Touchscreen Leather Knuckle/Palm Protection	Sage Green/Green Leather
HWI Digital Summer Flyer TS Glove TSFG-200E-XSM TSFG-200E-SM TSFG-200E-Medium TSFG-200E-XLarge TSFG-200E-Large TSFG-200E-XXLarge	Little Warmth Great Dexterity Water Resistant Warm Weather Use Touchscreen Textured (Digital) Leather	Sage Green or Black
HWI Smooth Summer Flyer TS Glove TSFG-200-XSM TSFG-200-SM TSFG-200-Medium TSFG-200-Large TSFG-200-XLarge TSFG-200-XXLarge	Little Warmth Great Dexterity Water Resistant Warm Weather Use Touchscreen Smooth Leather	Sage Green or Black
Line of Fire/Fly-By MFR PN: TS-FLY-FLG-USA-XX (Where XX = SM, MD, LG, XL, or XXL)	Good Warmth Little Dexterity Water Resistant Cold Weather Use Touchscreen Leather	Black/Black
Line of Fire/Sortie MFR PN: TS-SOR-FLG-USA-XX (Where XX = SM, MD, LG, XL, or XXL)	Some Warmth Good Dexterity Water Resistant Temperate Weather Use Touchscreen Leather	Foliage/Sage Green
Line of Fire/Sortie MFR PN: 1-TS-SOR-CYT-USA-XX (Where XX = SM, MD, LG, XL, or XXL)	Some Warmth Good Dexterity Water Resistant Temperate Weather Use Touchscreen Leather	Coyote
Line of Fire/Sortie MFR PN: 1-TS-SOR-BLK-USA-XX (Where XX = SM, MD, LG, XL, or XXL)	Some Warmth Good Dexterity Water Resistant	Black

	Temperate Weather Use Touchscreen Leather	
*Masley/FracWG MFR PN: FRACWG-FG-70Y-X (Where Y = N or W and X = S or M) FRACWG-FG-75Y-X (Where Y = N or W and X = L or XL) FRACWG-FG-80Y-XXL (Where Y = N) Note: "N" = Normal, "W" = Wide * No longer in production – Use still authorized.	Good Warmth Poor Dexterity Water Proof POL Resistant Cold Weather Use Touchscreen Leather	Foliage Green
MASSIF/Locator MGLV00012-BSXSG-X Where the "X" indicates the size (5, 6, 7, 8, 9, 10, 11, 12, 13)	Some warmth Good Dexterity Water Resistant Cold Weather Use Touchscreen Leather	Sage Green/Green Leather
MASSIF/Locator MGLV00012-BSXOC-X Where the "X" indicates the size (5, 6, 7, 8, 9, 10, 11, 12, 13)	Some warmth Good Dexterity Water Resistant Cold Weather Use Touchscreen Leather	OCP/Green Leather
*Outdoor Research/ Overwatch Sensor MFR PN: 70165-111-X (Where X = S, M, L, XL or XXL) * No longer in production – Use still authorized.	Some warmth Good Dexterity Water Repellent Temperate Weather Use Touchscreen Leather	Black
Wiley-X Orion TS Glove U302-SM-T, U302-ME-T, U302-LA-T, U302-XL-T, U302-2X-T	Some Warmth Good Dexterity Water Resistant Temperate Weather Use Touchscreen Leather	Sage Green/Black Leather
Wiley-X Orion TS Glove U301-SM-T, U301-ME-T, U301-LA-T, U301-XL-T, U301 -2X-T	Some Warmth Good Dexterity Water Resistant Temperate Weather Use Touchscreen Leather	Coyote Tan/Black Leather

6. DLA managed STF gloves, with descriptions like the COTS items above, are listed below.

HAU-15/P – Intermediate Cold Weather Glove (Non-Touch Screen, Sizes – 2-14) NSN: 8415-01-446-9247	Good Warmth Poor Dexterity Water Resistant Cold Weather Use	Green
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GS/FRP-2 - Summer Flyers Glove  
(Type I - Non-Touch Screen, Sizes – 2-14)  
NSN: 8415-01-229-0109

Little Warmth  
Good Dexterity  
Warm Weather Use

Sage Green/Gray  
Leather

GS/FRP-2 - Summer Flyers Glove  
(Type II - Touch Screen, Sizes – 2-14)  
NSN: 8415-01-657-0539

Little Warmth  
Good Dexterity  
Warm Weather Use

Sage Green  
Cloth and Leather

GS/FRP-2 - Summer Flyers Glove  
(Type II - Touch Screen, Sizes – 2-14)  
NSN: 8415-01-657-0325

Little Warmth  
Good Dexterity  
Warm Weather Use

Khaki Cloth and  
Leather

GS/FRP-2 - Summer Flyers Glove  
(Type II - Touch Screen, Sizes – 2-14)  
NSN: 8415-01-679-8088

Little Warmth  
Good Dexterity  
Warm Weather Use

Coyote Cloth and  
Leather

7. If further assistance is needed, contact: Mr. Don Fleury at (508)233-5603, [donald.f.fleury.civ@mail.mil](mailto:donald.f.fleury.civ@mail.mil).  
If further assistance is needed with DLA procured gloves, contact Ms. Sandee Wise at (215)737-8493, [sandee.wise@dla.mil](mailto:sandee.wise@dla.mil) or Mr. Taras Bilynsky at (215)737-3850, [taras.bilynsky@dla.mil](mailto:taras.bilynsky@dla.mil).

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