



# 429 HEMS MISSION COMPATIBILITY

10th October 2019, ZAKOPANE





# New standard for HEMS mission



Exceptional Speed to get to Scene and Patient to a Hospital

- Largest Contiguous Cabin in Class to better Treat Patient
- Excellent field of view and ambient lighting for Day time Operations and NVG Compatible for Night time Operations
- Smoothest Ride from Hover to  $V_{NE}$ 
  - Less Stress on Crew, Medical Attendants & Patient
- Only Light Twin Capable of Two Patients and Two Medical Attendants at Head of Patient
- Capacity for a Neo-Natal EMS Unit and up to Three Medical Crew



Bell Customer	Country	Bell 429 Fleet
Air Saint Luke's – Boise ID	United States of America	2
Air Transport Europe	Slovakia	3
Air Zermatt AG	Switzerland	2
CareFlite – Garland TX	United States of America	2
Delaware State Police	United States of America	2
Doctor Heli	Japan	1
Fairfax County Police	United States of America	2
Good Samaritan Hospital Air Care – Kearney NE	United States of America	1
HALO-Flight – Corpus Christi, TX	United States of America	1
Helidrive	Russia	1
Life Flight Kuwait	Kuwait	2
Lions Air	Switzerland	1
Mercy One – Des Moines, Iowa	United States of America	2
Mercy Flight – Buffalo, NY	United States of America	4
Naka Nihon Air Service	Japan	2
Nassau County Police Department	United States of America	2
NEMA Rescue	Nigeria	1
Royal Thai Police	Thailand	8
San Juan Regional Medical Center – Farmington NM	United States of America	1
Service d'Aide Medicale Urgente SAMU	France	2
Turkish Ministry of Health	Turkey	2
Univ. North Carolina Air Care – Chapel Hill, NC	United States of America	2
Wilshire Air Ambulance	United Kingdom	1
<b>Grand Total (As of June 2019)</b>	<b>12</b>	<b>49</b>



# Bell 429 Safety Features



Dual Hydraulics

Superior CAT A Performance

Damage Tolerant Blades

30 Minute Dry Run Transmission

Single Pilot IFR Certified

Performance and Automatic CG Calculator

Terrain Avoidance Warning Systems (TAWS)

Certified for Ditching

FADEC with Engine Exceedance Monitoring

Roll-over Bulkheads

Rupture Resistant Fuel Tanks

Large Doors for Patient Entry

Crash Attenuating Seats

Real-time Satellite Weather in the Cockpit

Collective Mounted Throttles

# Harsh Weather Environments



- Operates in Temperatures between  $-40^{\circ}\text{C}$  ( $-40^{\circ}\text{F}$ ) and  $51.7^{\circ}\text{C}$  ( $125^{\circ}\text{F}$ )
- Cold Weather Operations;
  - Operating in the Arctic with Canadian Coast Guard
  - Operating in Switzerland with Air Zermatt
- Hot Weather Operations;
  - Operating in Kuwait by Kuwait Ministry of Health
- Mountainous Regions
  - Operating in Swiss Alps by Air Zermatt
  - Operating in Scandinavian Mountains by Swedish National Police



# Various EMS Interiors - Aerolite



- 3 Different Levels of HEMS Interiors
  - Quick Change Interior
    - Easily removable equipment and stretcher.
    - No permanently attached equipment
  - Interior Compatible with 429 Seat Rails
    - Full Light weight EMS Interior however removable to perform other missions
    - Loading Platform for Side or Rear Loading
  - Roll-on/Roll-off EMS Interior
    - Medical Floor Overlay
    - Side or Rear Loading



# Various EMS Interiors – United Rotor Craft

- Roll-on/Roll-off Stretcher with Full EMS Interior
- Rear Loading Stretcher
- Medical Floor Overlay





# HEMS Capabilities

- Multiple Patient Loading Alternatives
  - RH and/or LH Side Loading w/ Wide Side Openings (RH & LH Sliding Doors (standard)
- Rear Loading w/ Rear Clamshell Doors (optional)
- Flat Floor throughout Cabin for easy loading and unloading of Stretcher
- Floor Height designed to be compatible with Stretcher height



# HEMS Operation – Side Loading of Patient



- 61.9" (157 cm) Wide Cabin Door Opening on Each Side of the Aircraft
- Automatic Door Openers available for the Hinged Door
- Flat Floor for Easier Loading of the Patient on Stretcher or Backboard
- High Main Rotor Height for Enhanced Safety for Loading and Unloading at the Scene
- Aircraft Flat Floor Height designed for ease of Loading Patient
- Loading from RH or LH Side Available to support Customer Operations



# HEMS Operations – Rear Loading of Patient



- Large Unobstructed Opening to the Cabin with Flat Floor
- Doors Snug up against Aircraft when Open.
  - Not Subject to Wind Gust
  - Can Approach Aircraft from the side to avoid tail of the aircraft
- High Tailboom eliminates the need to Bend Over while Loading Patient
- Two Windows in Doors for Visibility Into and Out of the Cabin



# HEMS Capabilities



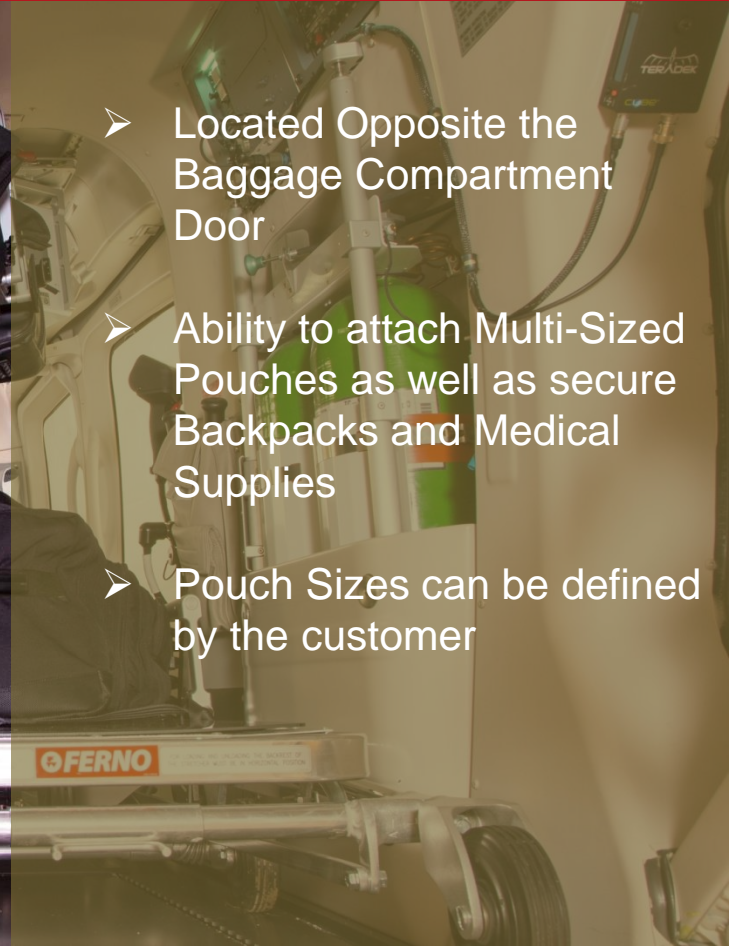
- Largest Unobstructed Cabin in its Class for Medical Personnel to work
- Medical Equipment and Electrical Power located near Patient
- Medical Attendant Seats capable of Swiveling and Tracking
- High Ceiling for easier mobility
- NVG Compatible LED Lighting for Night Operations



## HEMS Mission Equipment - Optional Medical Wall



- Located Opposite the Baggage Compartment Door
- Ability to attach Multi-Sized Pouches as well as secure Backpacks and Medical Supplies
- Pouch Sizes can be defined by the customer



# HEMS Operations



- Certified NVG Lighting for Night Operations
  - All Interior & Exterior Compatible Lighting
- No Blackout Curtain required between Cockpit and Cabin



# HEMS Mission Equipment



- Dual 200Amp Starter Generator for increased Electrical Power
- Articulated Landing Light for increased visibility landing at the Scene
- Rotor Brake for faster Shutdown at the Scene and Hospital
- LED Side Mounted Loading /Scene Lights (RH & LH) for increased Safety loading and unloading Patient
- LED Step Lights for Cabin Doors (RH & LH)

# HEMS Mission Equipment – Rescue Hoist



- Goodrich Model 44316 Hoist
- 600 lbs (272 Kg) Capacity
- Certified for Human External Cargo (HEC)
- Removable Components when not in Use
- Rappelling Ring
- Control Panel and Pendant located in Cabin
- Back-up Wire Cutter located in Cabin
- Mounted to Swing Away from Aircraft for Additional Clearance and Less Drag with not in use.

## Hoist Performance

Lowering Speed	260 fpm	1.32 mps
Raising Speed	250 fpm	1.27 mps



# HEMS Mission Equipment – Emergency Floats



- Bell Kit for Provisions and Equipment
- Available with 1 or 2 Liferafts (7-Person Capacity)
- Single Life Raft Available in LH or RH Float
- Float Bottle attached to Removable Equipment
- Quick Removal of Float Equipment (< 5 mins)
- Certified up to Sea State 5 (Sea State 6 Certification Pending Approval)
- Only Light Twin Certified for Ditching

# HEMS Mission Equipment – Additional kits

- 4-Axis Autopilot
- Traffic Avoidance System (TAS)
- Single or Dual Evaporator Air Conditioner
- Digital Audio System
- Polycarbonate Windows
- Weather Radar
  - Radar or Radar Service
- Wire Strike Protection System
- Satellite Phone XM or Iridium







# THANK YOU