

**BUTTE COUNTY SHERIFF'S OFFICE
DEPARTMENTAL ORDER**

**FILE KEY: 2011
PAGE: 1 of 13**

TO: ALL PERSONNEL

FROM: SHERIFF-CORONER

SUBJECT: Airborne Operation

DATE: May 01, 2018

ATTACHMENT: (1) Butte County Sheriff's Office STABO Manual

PURPOSE: To establish and publish procedures for STABO, long line, short-haul, Skid ride, and Rappelling operations.

BACKGROUND: The transport of one or more persons externally, suspended below a helicopter, by skid ride for a short distance, or by Rappel deployment.

ACTION: Effective immediately, the following actions and procedures shall be implemented:

**KORY L. HONEA
SHERIFF-CORONER**

Distribution "A"

(REV/18)

BUTTE COUNTY SHERIFF'S OFFICE
SPECIAL ENFORCEMENT UNIT STABO/RAPPEL MANUAL

I. Definition: Airborne Operations

- A. The transport of one or more persons externally, suspended below a helicopter, by skid ride for a short distance, or by Rappel deployment.

II. Utilization of STABO/Short-haul operations:

- A. Airborne operations expand the flexibility of the helicopter and crew, and may enhance the safety of an operation. STABO/Rappel personnel can be considered a resource when formulating response plans for law enforcement or Search and Rescue missions including, but not limited to:

Search and Rescue

- * Team Insertion/Extraction
- * Equipment Deployment/Retrieval
- * Victim Evacuation

Law Enforcement

- * Marijuana Eradication Operations
- * SWAT type operations
- * Rapid response to remote law enforcement operations

- B. The initial quick response to an incident can improve the results of any operation. STABO or Rappel can be utilized for this response, in the following types of conditions.

Rural Areas

- * Tall timber
- * Steep terrain
- * Canyon bases
- * Remote or inaccessible areas
- * Snag patches
- * Rock slides
- * Pinnacles
- * Ridge lines

Urban Areas

- * Tall structures
- * Natural disasters
- * Areas out of view, in hostage operations

Requirements for STABO/Rappel operations:

III. Pilot Requirements:

- A. Pilot shall maintain proficiency requirements per *Butte County Sheriff's Office Operational Directive OD-03-08 amended "Long Line/Short Haul/Rappel Requirements"*
- B. Pilot has the authority and will make the final determination of continuing any *external load* operation based on conditions and other determining factors including, but not limited to weather, hazards, aircraft performance, flight crew experience and/or proficiency, or any other factors affecting the safety of the operation.

IV. Pilots shall comply with the following minimum requirements: Public Use Aircraft

- A. Pilots shall be approved by the Chief Pilot and the Commander of the Unit.
- B. Have a minimum of 50 pilot-in-command (PIC) hours, in make and model of the aircraft being operated.
- C. Have a minimum of 25 hours total time of vertical reference (VR) experience.
- D. Attend an approved STABO/Rappel training session.
- E. Understand STABO and Rappel techniques, STABO Master and Rappel Master signals, and operational concerns.
- F. Demonstrate the ability to pilot the helicopter under STABO and Rappel missions, work with the STABO Master or Rappel Master, and conduct a series of STABO and/or Rappel operations.
- G. Pilots shall have conducted four (4) live loads within the last sixty (60) days. STABO and/or Rappel
- H. Demonstrate the ability to complete load calculation form OAS-67 / FS 5700-17 (Interagency Helicopter Load Calculation)
- I. Pilots shall test yearly based on United States Forest Service Vertical reference (VTR) proficiency with a 150' long line for live external loads.
 - 1. A pilot failing to pass the yearly proficiency test will be grounded from doing live load long line work for a period of thirty (30) days at which time they will be allowed to retest.

V. Pilots shall comply with the following minimum requirements: FAA Part 133 (Carded aircraft)

- A. Pilots shall be approved by the Chief Pilot and the Commander of the unit.
- B. Have a minimum of 1500 hours total time in a helicopter
 - 1. Pilot in Command (PIC) in helicopter – 1500 hours
 - 2. Helicopter preceding 12 months 100 hours
 - 3. Time in weight class 100 hours
 - 4. Time in make and model 50 hours
 - 5. Time in make, model, series last 12 month - 10 hours
 - 6. Turbine helicopter operations 100 hours
- C. Have a minimum of 25 hours total time of vertical reference (VR) experience
- D. Attend an approved STABO/Rappel training session.
- E. Understand STABO and Rappel techniques, STABO Master and Rappel Master signals and operational concerns.
- F. Demonstrate the ability to pilot the helicopter under STABO and Rappel missions, work with the STABO or Rappel Master, and conduct a series of STABO and/or Rappel operations.
- G. Pilots shall have conducted four (4) live loads within the last sixty (60) days. STABO and Rappel
- H. Demonstrate the ability to complete load calculation form OAS-67 / FS 5700-17 (Interagency Helicopter Load Calculation)
- I. Pilots shall test yearly based on United States Forest Service Vertical reference (VTR) proficiency with a 150' long line for live external loads.
 - 1. A pilot failing to pass the yearly proficiency test will be grounded from doing live load long line work for a period of thirty (30) days at which time they will be allowed to retest.

VI. Chief STABO/Rappel Master requirements:

- A. Chief STABO/Rappel Master - The Chief STABO/Rappel Master shall be approved by the Chief Pilot, and the division commander.
- B. Must be a qualified STABO and Rappel Master
- C. Must be a Sheriff's Office Employee – designated first responder or Search and Rescue Personnel
- D. Successfully complete an approved STABO Master and Rappel Master course
- E. Successfully complete an approved helicopter training or basic helicopter safety course.
- F. Successfully instruct one (1) STABO and Rappel course within the last 12 months
- G. Demonstrate the ability to work with pilots, STABO Masters, and Rappel Masters.
- H. Demonstrate the ability to complete the standard load calculation form OAS-67 / FS 5700-17
- I. Demonstrate the ability to rig the helicopter for STABO and Rappel for both Public Use aircraft and part 135/133 Aircraft
- J. Satisfactorily provide safety briefing and safety check of STABO and Rappel personnel without procedural error.
- K. Demonstrate the ability and knowledge for inspection, care, and maintenance of all STABO and Rappel equipment.
- L. Demonstrate the knowledge of emergency procedure
- M. Spot two (2) live loads of STABO within the last 12 months
- N. Spot two (2) helicopter rappels and four (4) tower rappels in the last 12 months
- O. Demonstrate the knowledge and ability to rig a static line for descending
 - 1. Standing – Back off / hard wall
 - 2. Standing – Back off / free
 - 3. Standing – Forward / hard wall
 - 4. Prone rollover
 - 5. Window – back out
- P. The Chief STABO/Rappel Master shall participate in one (1) STABO and Rappel training or recertification class per year to re-qualify as Chief STABO/Rappel Master.

VII. STABO Masters requirements:

- A. Demonstrate the ability and knowledge for inspection, care, and maintenance of all STABO equipment
- B. Demonstrate the ability to rig the helicopter for STABO, provide safety briefing, and safety checks of STABO personnel without procedural error.
- C. Demonstrate knowledge of emergency procedures
- D. Spot two (2) live loads of STABO within the last 12 months – A load is one pickup and one landing
- E. Demonstrate the ability to work with the pilot
- F. Demonstrate the ability to complete the standard load calculation form OAS-67 / FS 5700-17.
- G. STABO Masters shall participate in one (1) STABO training or recertification class per year to re-qualify as a STABO Master

VIII. STABO Master Trainee requirements:

- A. Under the supervision of the Chief STABO/Rappel Master and Chief Pilot or qualified STABO Master, a STABO Master Trainee shall:
 - 1. Demonstrate the ability and knowledge of inspection, care, and maintenance of STABO equipment.

2. Demonstrate the ability to rig the helicopter for STABO, provide safety briefing, and safety check of STABO personnel without procedural error.
 3. Demonstrate knowledge of emergency procedures.
 4. Spot two (2) live loads (STABO). (A load is one pickup and one landing).
 5. Demonstrate the ability to work with the pilot.
- B. Additionally, STABO Master Trainees must be a sworn law enforcement officer, reserve law enforcement officer, Search and rescue personnel, or personnel as approved by the Chief STABO/Rappel Master, Chief Pilot, or Division Commander.
 - C. All personnel must be able to perform the physical duties of any and all operations associated with STABO missions.
 - D. The STABO Master Trainee shall participate in one (1) STABO training or recertification class per year to qualify as STABO Master.

Note: The STABO Master must perform all STABO Master duties. The Chief STABO/Rappel Master may determine the number of STABO missions necessary to qualify a new STABO Master above the minimum requirements.

- E. New STABO Masters and STABO Master Trainees shall be selected by the Chief STABO/Rappel Master, Chief Pilot, and division Commander. Initial STABO training shall be conducted by qualified Training Specialists, qualified Chief STABO/Rappel Master, or qualified STABO Master Personnel in accordance with Special Enforcement Unit Training, Search and Rescue Training, or equivalent. Qualified Chief STABO Masters from other agencies can be used for initial qualification, continuous training, and re-qualification training as approved by the division commander, Chief STABO/Rappel Master and the Chief Pilot.

Subsequent training and STABO Master selections may be accomplished by each agency approved by the Chief STABO/Rappel Master, Chief Pilot, and Division Commander.

IX. Initial STABO Trainee requirements:

- A. Successfully complete Helicopter Training or Basic Helicopter Safety course by approved personnel.
- B. Demonstrate the ability and knowledge of inspection, care, and maintenance of STABO equipment.
- C. Demonstrate knowledge of STABO procedures.
- D. Demonstrate knowledge of emergency procedures.
- E. Successfully complete a minimum of four (4) short-hauls (STABO) without procedural error.
- F. Must be a sworn law enforcement officer, reserve law enforcement officer, Search and Rescue personnel, or personnel as approved by the Chief Pilot, Chief STABO/Rappel Master or Division Commander.
- G. All personnel must be able to perform the physical duties of any and all operations associated with STABO missions.

Note: STABO Masters may require additional training to develop or improve proficiency. The Chief STABO/Rappel Master or STABO Master Personnel will determine STABO's to be accomplished in typical terrain and/or areas.

X. STABO Personnel Training Requirements:

- A. STABO Masters, STABO Master Trainees and STABO personnel shall complete the aforementioned requirements as approved by a qualified Training Specialist and/or STABO Master participating in the training. The Chief STABO/Rappel Master may require additional training based on the complexity of the program, or for individuals not meeting training level requirements. If a person cannot meet the minimum requirements, as outlined, the Chief STABO/Rappel Master shall not qualify the individual for STABO operations.

XI. Documentation:

- A. It is the responsibility of the Chief STABO/Rappel Master, Chief Pilot, and/or STABO Master personnel to maintain documentation for initial training, recertification, and proficiency, to include a minimum of:
 - 1. Date
 - 2. Name of STABO personnel
 - 3. Location
 - 4. Type of STABO (training or operational)
 - 5. Number of STABO cycles
- B. A secondary training POST roster will be maintained by this Department's training division through Training Management System (TMS) and at POST.

XII. Required equipment for STABO personnel:

- A. Helmet - Military, Law enforcement (SWAT) type, or commercially made rock climbing type, all helmets shall have a retention device, chin strap or equivalent. Personnel may short haul without a helmet as mission dictates or under the approval of the onsite STABO Master
- B. Goggles – Glasses with retaining strap or goggles. Personnel may short haul without goggles as mission dictates or under the approval of the onsite STABO Master
- C. Class B Clothing – (All long-sleeve) Clothing should be mission specific.
- D. Boots – All leather lace up boots or Cordura nylon type SWAT boots.
- E. Cutting Device – A knife, seatbelt cutter, or other approved cutting device shall be worn by all STABO personnel in an area that is accessible and can be easily removed for emergency use. A lanyard may be attached to the cutting device and the carrying case to eliminate dropping.

XIII. Suggested equipment for STABO personnel:

- A. Signaling device – Signaling mirror, strobe light, or other appropriate signaling devices for conditions.
- B. Gloves- Nomex or leather. Gloves are not required during airborne operations (STABO), but should be mission specific.
- C. Personal hydration system.
- D. Personal first aid kit

XIV. Skid Deployment Equipment:

- A. All harnesses used during Skid deployment operations shall be NFPA (National Fire Protection Association) or UIAA (International Climbing and Mountaineering Federation) compliant seat type.
 - 1. The Chief STABO/Rappel Master, Chief Pilot, or on site STABO Master may approve “Rigger” style belts that meet PIA-H-7195 (Parachute Industry Association) standards (1.75” webbing”). Under no circumstances shall “Rigger” belts be used during lifesaving efforts.
- B. Helmets are not required during Skid deployment operations.
- C. Goggles – Glasses with retaining strap or goggles. Eye protection is required for all personnel during Skid deployment operations.
- D. Class B Clothing – (All long-sleeve) Clothing should be mission specific
- E. Boots – All leather lace up boots or Cordura nylon type SWAT boots
- F. Cutting Device – A knife, seatbelt cutter, or other approved cutting device shall be worn by all personnel in an area that is accessible and can be easily removed for emergency use. A lanyard may be attached to the cutting device and the carrying case to eliminate dropping.
- G. Gloves- Nomex or leather. Gloves are not required during airborne operations, but should be mission specific

XV. STABO/Short Haul equipment requirements and documentation:

- A. Personally owned STABO/Short Haul equipment will not be authorized unless the equipment has proper documentation (date of purchase, make, model) and has been inspected by the Chief STABO/Rappel Master, Chief Pilot, or qualified STABO Master. Personal equipment will adhere to the established manufactures inspection and documentation procedure. Any personally owned STABO/Short Haul equipment failing inspection will be removed from service, marked as “Failed – not serviceable” and returned to the owner.

XVI. STABO/Short Haul long line/rope:

- A. All STABO/Short Haul long lines (ropes) shall be of a plasma line or equivalent design at least one half inch in diameter with a safe working load rating of 4,400 pounds minimum.
 - 1. Covers or sheathes are recommended for mountainous terrain but are not required.
- B. Long Lines/Ropes shall be kept in good working condition and stored properly (bagged and stored off the ground).
- C. Long Lines/Ropes shall be inspected prior to use by the Chief STABO/Rappel Master, Chief Pilot, or STABO Master.
 - 1. A minimum of two personnel will inspect the long line/rope prior to use
- D. The long lines/ropes shall be on a three year inspection cycle with the manufacturer.
 - 1. The manufacturer’s inspection shall include at minimum a load test, stitching inspection, and deformity identification.
- E. Long lines/Ropes failing inspection shall be immediately removed from service, marked as “Failed Do Not Use”, and sent to the manufacture for repair or replacement.
- F. Long lines/Rope will be considered timed out after 10 years of service.
 - 1. A long line/rope may remain in service after the 10 year time out date if it has been inspected and certified by the manufacture.

XVII. Carabiners:

- A. Carabiners shall be NFPA (National Fire Protection Association) compliant, auto locking with a minimum rating of 32Kn (7,500 lbs.)
- B. Carabiners shall be maintained by the Chief STABO/Rappel Master, Chief Pilot, or a qualified STABO Master.
- C. Carabiners shall be kept clean and in good working condition.
- D. Carabiners will be considered timed out after five (5) years of service, or if any excessive wear, corrosion, or damage has occurred.
- E. Carabiners shall be inspected prior to use by the Chief STABO/Rappel Master, Chief Pilot, or qualified Rappel Master.
 - 1. Any carabineer failing inspection shall be immediately removed from service, marked, and destroyed.
 - 2. Under no circumstances shall any carabineer failing inspection be used in STABO operations.

XVIII. Line Swivel:

- A. All long line swivels shall be of steel or steel/alloy construction with a minimum 5:1 safe working load of 6,000 lbs.
- B. Swivels shall be maintained by the Chief STABO/Rappel Master, Chief Pilot, or qualified STABO Master
- C. Swivels shall be inspected prior to use and continuously during any operation. A swivel failing inspection shall be immediately removed from service, marked, and returned to the manufacture for repair or replacement.
- D. A swivel will be considered timed out after ten (10) years of service.
 - 1. A swivel may remain in service after the 10 year time out, if inspected and certified by the manufacturer.

XIX. Harnesses:

- A. All harnesses used during STABO/Short Haul operations shall be NFPA or UIAA compliant full body.
 - 1. Seat harnesses are not approved for STABO/Short Haul.
 - 2. Seat harnesses or “Riggers” belts used during Skid deployment operations shall be NFPA or UIAA complainant (seat Harness) or PIA-H-7195 compliant (Riggers belt).
 - 3. All Skid deployment harnesses shall be inspected and documents in accordance with STABO inspection guidelines.
- B. Harnesses shall be inspected prior to uses and continuously during any STABO/Short Haul operation by the Chief STABO/Rappel Master, Chief Pilot, or qualified STABO Master.
- C. Harnesses shall be inspected yearly by a qualified manufacturer representative.
- D. Harnesses shall be considered timed out 10 years after manufactures date.
- E. Any harness failing inspection shall be immediately removed from service, marked, and returned to the manufacturer for repair or replacement.
- F. All harnesses shall be maintained and stored in good working condition, (clean, dry and off the ground).

XX. Helicopter Belly Band:

- A. The belly bands used by this department are custom made by an approved manufacturer.
- B. Belly bands shall be inspected prior to use by the Chief STABO/Rappel Master, Chief Pilot, or a qualified STABO Master.
- C. Belly bands shall be inspected yearly by a qualified manufacturer's representative.
- D. Any belly band failing inspection shall be immediately removed from service, marked, and returned to the manufacturer for repair or replacement.
- E. Belly bands will be considered timed out 10 years from manufacturers date.

XXI. A-Frames:

- A. A-Frames used by this department are custom made by an approved manufacturer.
- B. A-Frames shall be inspected prior to use by the Chief STABO/Rappel Master, Chief Pilot, or a qualified STABO Master.
- C. A-Frames shall be inspected yearly by a qualified manufacturer's representative
- D. A-Frames will be considered timed out 10 years from manufacturers date.

XXII. Pick-off Straps:

- A. Pick-off straps used during skid ride deployment and rescue operations shall be NFPA or UIAA approved, 1:1 or 2:1 standard 1.75 inch width with a minimum rating of 22 KN (4,900 lbs.)
- B. Pick-off straps shall be inspected prior to use by the Chief STABO/Rappel Master, Chief Pilot, or a qualified STABO Master.
- C. Pick-off straps shall be inspected yearly by a qualified manufacturer's representative.
- D. Pick-off straps shall be considered timed out 10 years from date of manufacture.

XXIII. STABO and Equipment Log Books:

- A. A log book detailing the date of manufacture inspection shall be maintained by the Chief STABO/Rappel Master or their designee.
- B. The log book shall contain an inspection log for each item used during STABO and Rappel operations.
 - 1. The log shall contain Inspectors name and initials, date of inspection, webbing pass/fail, stitching pass/fail, D rings pass/fail, buckles pass/fail, as well as a miscellaneous and comments section.
 - 2. Factory long line/rope inspection and certification sheets will be maintained in their entirety within the log book.
- C. Each long line/rope system will contain within its container a log/records book.
 - 1. The Chief STABO/Rappel Master, Chief Pilot, or qualified STABO Master shall enter the number of lifts, mission type, max load, and potential shock loads after each use.
 - 2. When practical, the harnesses used and the number of lifts should be entered in the log/records book.
 - 3. Personnel inspecting the long line/rope should enter their names and inspection type within the log/records book.

Airborne rappelling Operations:

XXIV. Rappel Master and Rappel Master Trainee Requirements:

- A. Rappel Masters shall be approved by the Chief STABO/Rappel Master, Chief Pilot, and the Commander of the Unit.
- B. Must successfully complete an approved rappel master course.
- C. Must successfully complete an approved helicopter training course or basic helicopter safety course.
- D. Demonstrate the ability and knowledge of inspection, care and maintenance of all rappelling equipment.
- E. Demonstrate the ability to rig the helicopter for rappel, provide safety briefing and safety check of rappel personnel without procedural error.
- F. Demonstrate knowledge of emergency procedures
- G. Spot two (2) helicopter rappels and four (4) tower rappels (hard wall) within the last 12 months.
- H. Demonstrate the ability to work with the pilot.
- I. Demonstrate the knowledge and ability to rig a static rappel line for descending
 - 1. Standing – Back off / Hard Wall
 - 2. Standing – back off / Free
 - 3. Standing – Forward / Hard Wall
 - 4. Prone Roll Over
 - 5. Window – Back out
- J. Rappel Masters and Rappel Master Trainees shall participate in one (1) rappel training or recertification class yearly to requalify (qualify if Trainee) as a Rappel Master.

Note: The Chief STABO/Rappel Master may require additional training to develop or improve proficiency. The Chief STABO/Rappel Master and Chief Pilot will determine the number and location of rappels to be accomplished.

XXV. Rappel Trainee requirements:

- A. Successfully compete an approved helicopter training course or basic helicopter safety course.
- B. Demonstrate the ability and knowledge for inspection, care, and maintenance of all Rappel equipment.
- C. Demonstrate knowledge of rappelling procedures
- D. Demonstrate knowledge of emergency procedures
- E. Successfully compete four (4) tower rappels (hard wall) and two (2) helicopter rappels within the last 12 months.
- F. Must be a sworn Law Enforcement Officer, Reserve Law Enforcement Officer, designated First Responder, Search and Rescue Personnel, or personnel as approved by the Chief Pilot, Chief STABO/Rappel Master, or the Unit Commander.
- G. Personnel must be able to perform the physical duties of any and all operations associated with the rappel mission.

Note: The Chief STABO/Rappel Master, Chief Pilot, or qualified Rappel Master may require additional training to develop or improve proficiency.

XXVI. Rappel Personnel Training Requirements:

- A. Rappel Masters, Rappel Master Trainees, and Rappel Trainees shall complete the aforementioned requirements as approved by a qualified training specialist and/or Rappel Master participating in the training. The Chief STABO/Rappel Master may require additional training based on the complexity of the program, or for individuals not meeting training requirements. If a person cannot meet the minimum qualifications as outlined, the Chief STABO/Rappel Master shall not qualify the individual for rappel operations.

XXVII. Documentation:

- A. It is the responsibility of the Chief STABO/Rappel Master, Chief Pilot, or Rappel Master personnel to maintain documentation for initial training, recertification, proficiency and operational Rappels, to include a minimum of:
 - 1. Date
 - 2. Name of Rappel personnel
 - 3. Location
 - 4. Type of Rappel (training or operational)
 - 5. Number of Rappels

XXVII. Required equipment for Rappel personnel:

- A. Helmet - Military, Law enforcement (SWAT) type, or commercially made rock climbing type, all helmets shall have a retention device, chin strap or equivalent.
- B. Goggles – Glasses with retaining strap or goggles.
- C. Class B Clothing – (All long-sleeve) Clothing should be mission specific.
- D. Boots – All leather lace up boots or Cordura nylon type SWAT boots.
- E. Cutting Device – A knife, seatbelt cutter, and/or other approved cutting device shall be worn by all rappel personnel in an area that is accessible and can be easily removed for emergency use. A lanyard may be attached to the cutting device and the carrying case to eliminate dropping.
- F. Gloves- Approved rappelling gloves or tactical gloves with rappelling “over gloves”

XXVIII. Suggested equipment for rappel personnel:

- A. Personal hydration system
- B. Personal first aid kit
- C. 10' Prusik cord / Prusik sling 6-7 millimeter diameter
- D. One (1) general use webbing strap.

XXIX. Rappelling Equipment Requirements:

- A. Personally owned rappel equipment will not be authorized unless the equipment has proper documentation (date of purchase, make, model) and has been inspected by the Chief STABO/Rappel Master, Chief Pilot, or qualified rappel Master. Personal equipment will adhere to the established manufactures inspection and documentation procedure. Any personally owned rappel equipment

failing inspection will be removed from service, marked as “Failed – not serviceable” and returned to the owner.

XXX. Harnesses:

- A. All harnesses used during rappelling operations shall comply with NFPA or UIAA standards.
- B. Harnesses may be full body or seat type
- C. Harnesses shall be inspected prior to uses by Chief STABO/Rappel Master, Chief Pilot, or Rappel Master.
- D. Harnesses shall be inspected yearly by a qualified manufacturer representative.
- E. Harnesses failing inspection shall be immediately removed from service, marked, and returned to the manufacturer for repair or replacement.
- F. Harnesses shall be stored in a dry area, clean, and out of direct sunlight.
- G. Harness inspection and use will be logged and maintained in the STABO equipment log book.

XXXI. Carabiners:

- A. Shall be of aluminum or steel alloy construction, NFPA or UIAA compliant, with a minimum working load rating of 22Kn (5,000 lbs.)
- B. Carabiners shall have a threaded locking gate or auto locking gate.
 - 1. Non Locking type carabiners are not to be used for rappelling operations.
- C. Carabiners must be of the same size as to the spine length and configuration if used in pairs for rappelling
- D. Carabiners shall be inspected prior to use by the Chief STABO/Rappel Master, Chief Pilot, or qualified Rappel Master.
 - 1. Any carabineer having signs of excessive wear, faulty gate, corrosion, or damage shall be immediately removed from service and destroyed.
- E. Carabiners will be considered timed out five (5) years from date of purchase.

XXXII. Rappel Ropes:

- A. Static single load ropes
 - 1. Static single load ropes shall be 11 millimeter (7/16”) diameter of either Kernmantle static line or Kernmantle dynamic line
- B. Static Safety – double load ropes
 - 1. Static safety – double load ropes shall be 12.5 millimeter (1/2”) diameter of either Kernmantle static line or Kernmantle dynamic line
- C. Ropes shall be inspected prior to use by the Chief STABO/Rappel Master, Chief Pilot, or a qualified Rappel Master.
 - 1. A minimum of two personnel shall conduct the rope inspection
- D. Ropes shall be inspected yearly by a qualified manufacturer representative
- E. Ropes failing inspection shall immediately be removed from service, marked, and destroyed.
- F. Rope inspection logs will be maintained in the STABO equipment log book
- G. Ropes will be considered timed out 10 years from manufacturers date.

XXXIII. Descenders:

- A. Descenders shall be NFPA or UIAA compliant made of aluminum or steel (steel alloy) with a minimum rating of 22Kn (5,000)
- B. Descenders can be standard figure 8 plates or mechanical design.
 - 1. Mechanical descenders must be capable of performing and carrying a rescue dual load.
- C. Descenders shall be inspected prior to use by the Chief STABO/Rappel Master, Chief Pilot, or qualified Rappel Master.
- D. Descenders shall be inspected yearly by a qualified manufacturer's representative.
- E. Any descender failing inspection shall be immediately removed from service, marked, and destroyed.

XXXIV. Rigging equipment:

- A. All rigging equipment IE... Anchor straps, anchor rings, wall plates, screw links, pulleys, swivels, or any other equipment used to secure the rappel lines or rappel personnel, shall be NFPA or UIAA compliant and compatible with the system being used.
- B. All anchoring equipment shall be inspected prior to use by the Chief STABO/Rappel Master, Chief Pilot, or qualified Rappel Master.
- C. Anchoring equipment may be inspected yearly by a qualified manufacturer's representative if such an inspection service is available.
- D. Any item failing inspection shall be immediately removed from service, marked, and destroyed.