



SUPER ANCHOR SAFETY®

SAS-*Hinge-3006* No. 1321-CAN HLLS Horizontal Lifeline System w/Energy Absorber Temporary Installation Only Instruction/Specification Manual 2018

ENGLISH
VERSION

!WARNING TO USER!
You are required to read and use the Instruction/Specification manual supplied at the time this device was shipped. Improper use and installation can result in serious injury or death. Follow inspection requirements before each use.

System Specifications

Min. Tensile Strength 5,000lb(22.5kN).
Specified Use: Fixed Length HLLS for Temporary Installation on wood framed structures. This device is not intended to be installed as a permanent fixture.
Anchor Connectors Hinge No. 3006
11ga. steel yellow zinc plated.
HLL Cable max. Length 20ft(6m)
Galvanized Steel Wire rope: 3/8"x7x19.
Break strength: 14,400lb(64kN).
Terminations: Thimble splice w/2 aluminum sleeves.

Metallic Energy Absorber

SAS No. 1059 -316 SST. Fig.3a
Wt: 6.3lb(2.9kg) Serial numbered.
Performance Specifications:
Min. break strength 5,625lb(25kN)
Tension Indicator Green Arrow: ◀
Min. Activation Force: 44lb(0.2kN)
Fall Indicator Red Arrow: ▶
Avg. Dynamic Activation Force: 771lb(3.5kN)
Peak Activation Force: 1,322lb(6kN)
Attachment Bolts: Grade 8 zinc plated
7/16-14x2-1/4" bolts with lock nuts.

User Specifications

Fall Arrest: 2 person
Fall Restraint: 3 person
Absorber Dimensions
Static Length: 17"(432mm)
Max. Deployed Length: 25"(635mm)
Fall Indicator Max. deployed length
Red Arrow end ▶ 7-1/2"(191mm)
Tension Indicator Max. deployed length
Green Arrow end ◀ 1/2"(12mm)

Compliance: OSHA
1926.502/1910.66 ANSI
Z359.1-07/A10.32-2012
Certified by a member of
l'Ordre des ingénieurs du
Québec.
Meets Safety Code for
use in Québec.

Personal Protective Equipment (PPE)

All workers attached to the HLLS must be equipped with fall protection equipment compliant with current CSA, OSHA or ANSI standards for fall arrest or fall restraint (work positioning).

PPE Energy Absorber Requirement

Each worker is REQUIRED to have a personal energy absorber component as part of their fall protection equipment.

Maximum Arrest Force (MAF) system design per person:

310lb(140kg) w/E-4 Energy absorber 900lb(4kN)
340lb(154kg) w/E-6 Energy absorber 1300lb(6kN)

Fall Hazard Exposure

PPE must be rigged as follows:

Fall Arrest use: Max. free fall 6ft(1.8m).

Fall Restraint use: No free fall exposure.

Note: The use of a job specific fall protection plan (JSP) is recommended.

Non-Specified Use

Not rated for use with Self Retracting Lifelines (SRL)
Do not use for window washing or suspended work.

Temporary Use Only

WARNING! Evacuate the HLLS immediately after use. Prolonged exposure to moisture will result in deterioration of wood framing and fastener strength.

Connectors

Snaphooks and carabiners must have 3600lb(16kN) gate strengths and comply with current ANSI/CSA standards.

System Modification

HLL components are factory attached to the Hinge anchor D-rings.
DO NOT modify, remove or attach additional components.

Storage/Maintenance

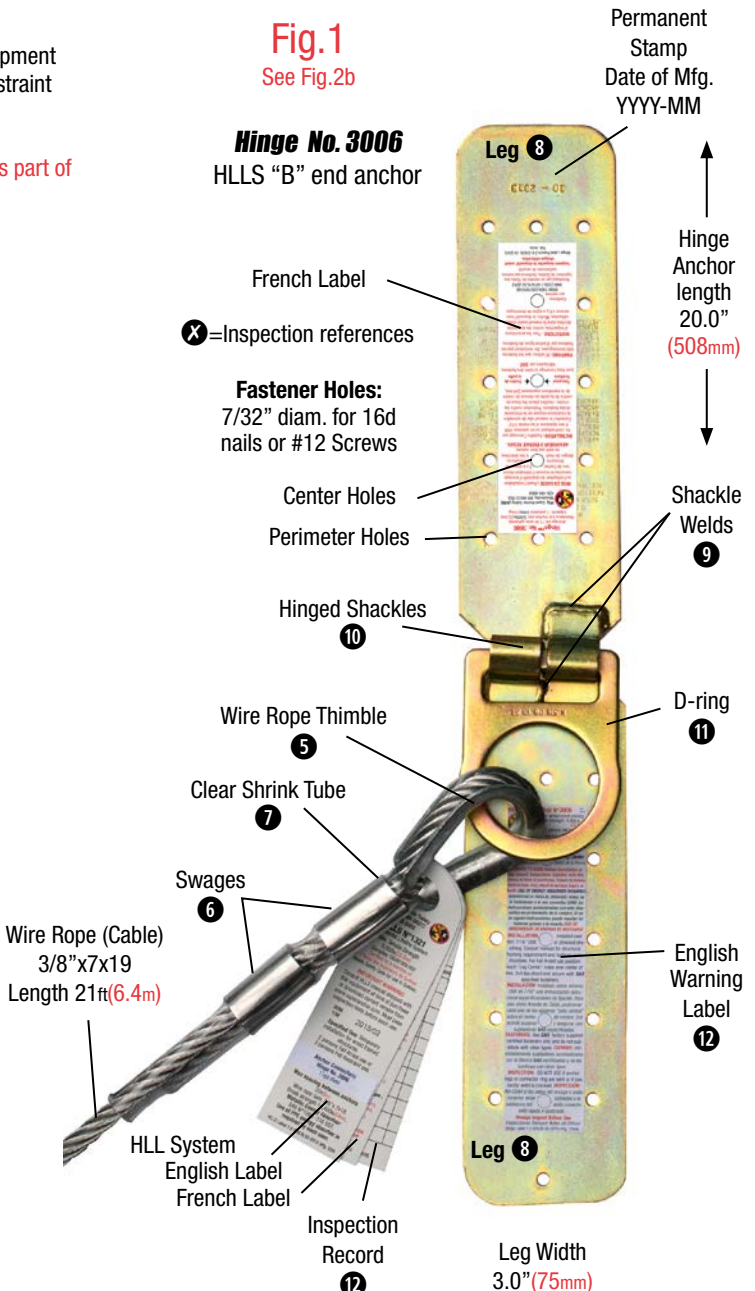
Avoid binding or bends and coil cable so it lays flat. Store indoors in a dry area to prevent oxidation of the components. DO NOT store outdoors or place materials or tools on top of the HLLS. Hinge anchor and absorber replacement labels are available upon request.

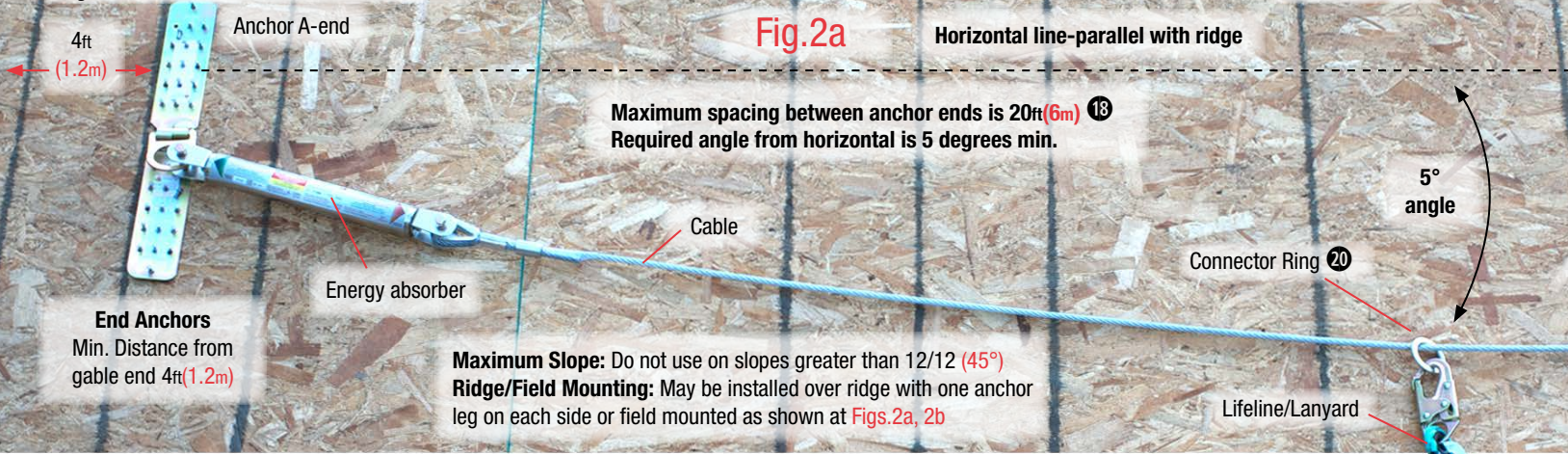
Removal From Service

- 1) If the HLLS is subjected to a free fall or other force that activates the metallic energy absorber. See Fig.3c
- 2) If any of the components show signs of wear or fail to pass daily or annual inspection.
- 3) **Disposal:** Do not disassemble, re-use or salvage any components of HLLS

Fig.1

See Fig.2b





Annual and Daily Inspections

All components should be inspected prior to each use and inspected at least once a year by a competent person. Inspections may be recorded on the system inspection label. See pg.4. A written plan for equipment service, maintenance, removal from service and user training should be maintained by a competent person for each component of the HLLS. The following supplemental inspection points may be used as a guideline for primary areas of normal wear, tear and abuse.

Remove equipment from service if any non-repairable conditions are present:

- 1 Subjected to a free fall or other force.
- 2 Obvious damage to any component.
- 3 Fails inspections or has not been inspected annually.

ADVISORY! All equipment removed from service should be tagged and disposed of in a way that prevents further use.

ACTION REQUIRED: ☒=Remove ☑=Repair

Cable (Wire Rope) Fig.3e

- 4 Cable Strands are cut or hocked. ☒
 - 5 Thimble missing, broken or deformed. ☒
 - 6 Swages are cracked, cut or missing. ☒
 - 7 PVC swage cover tubing is missing. ☑
- Does not require HLLS removal from service.

Hinge Anchor Fig.1, 3a

- 8 Legs are cut, bent or deformed. ☒
- 9 Hinge shackle welds are cracked. ☒
- 10 Shackles are deformed. ☒
- 11 D-ring is cut or deformed. ☒
- 12 Anchor, Absorber or system warning labels are missing or not legible. ☑ See pg.4 Request replacement labels.

No. 1059 Metallic Energy Absorber Fig.3

- 13 Fall Indicator is deployed. ☒ Fig.3d
- 14 Tension Indicator is visible. ☒ Fig.3b
- 15 Attachment bolts are missing. ☒
☑ determine why. May be corrected.
- 16 Attachment bolt nut/s loose. ☑ Tighten.

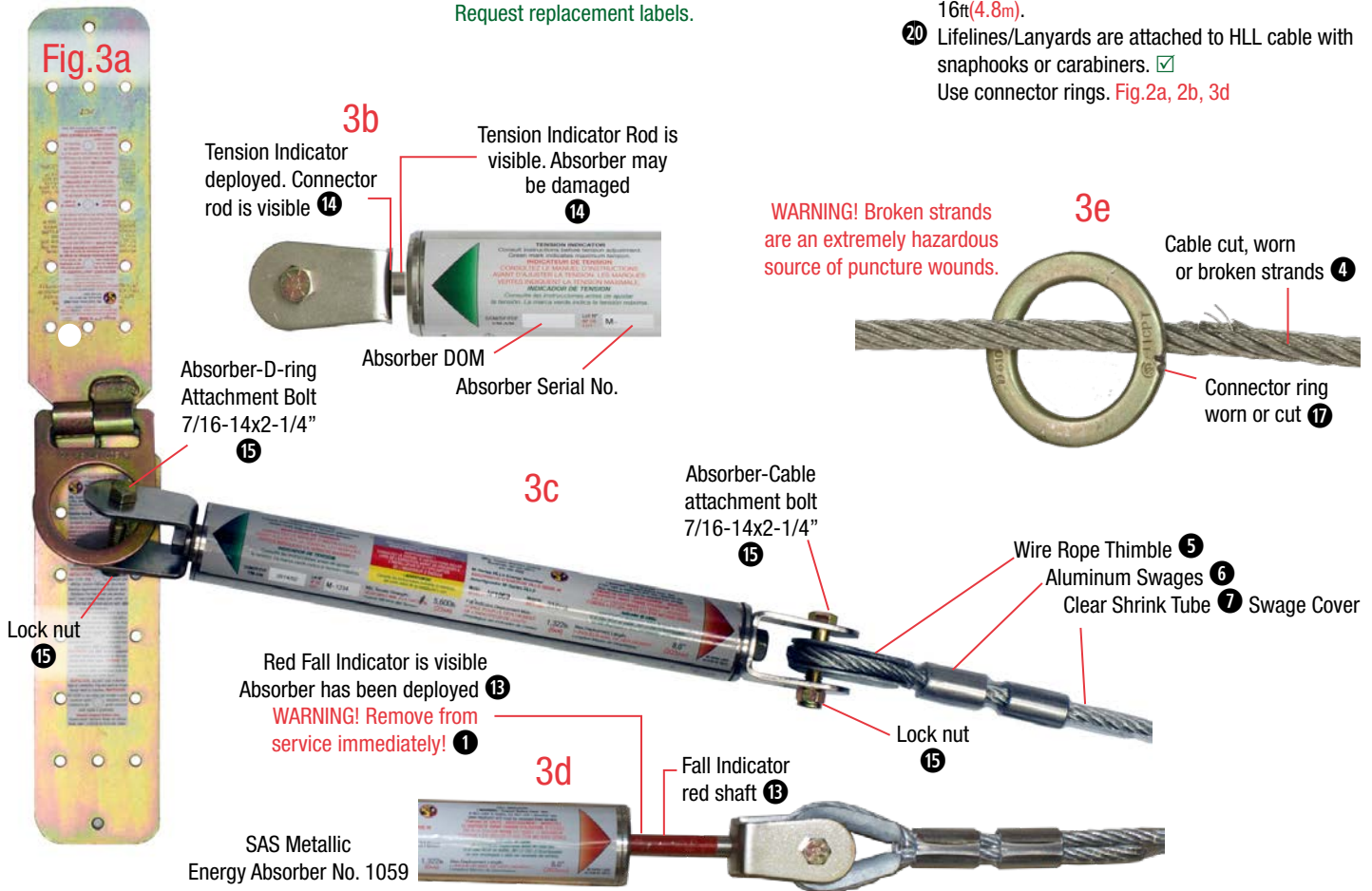


Cable Connector Rings Fig.3e

- 17 Bent, cut, worn or missing. ☒

Rigging Fig. 2a, 2b

- 18 Distance between anchor ends is more than 20ft(6m). ☑ Check rafter spacing to confirm 20ft (6m) length per Figs. 2a, 2b
- 19 Distance between anchor ends is less than 20ft(6m). ☑ Check rafter spacing. Min. length is 16ft(4.8m).
- 20 Lifelines/Lanyards are attached to HLL cable with snaphooks or carabiners. ☑ Use connector rings. Fig.2a, 2b, 3d



SAS Metallic Energy Absorber No. 1059

Horizontal line-parallel with ridge

Fig.2b

Minimum spacing between anchor ends is 16ft(4.8m) ⑩

4ft

(1.2m)

Anchor B-end

Min. Distance from gable end

Connector Ring ⑫

Table 1: Fastener Specifications/Strength Rating

See Fig.	Fastener Type	No. Required Each Leg	Total Fasteners	Attached to		Strength Rating	No. Persons	
				Top Chord	Sheathing		Fall Arrest	Fall Restraint
4a	▲ 16d Duplex Nail	18	36	12	24	5,000lb	2	3
4b	▲ #12 2-7/8" Screw	10	20	12	8			

▲ Do not reuse fasteners.

Fastening Specifications

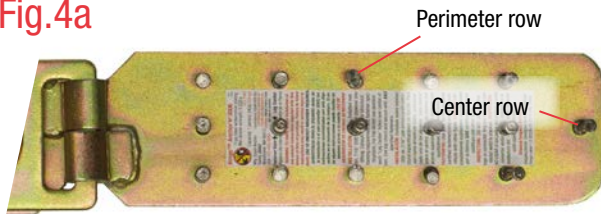
Shown at Figs.4a, 4b, required number and type of fasteners for each anchor leg.

WARNING! Use only SAS supplied fasteners. DO NOT substitute with other types.

Torque Setting: **WARNING!** Do not overtighten screws to prevent damage to the fasteners.

Flush mount screws to anchor leg surface with the minimum torque necessary.

Fig.4a



Perimeter row

Center row



36-16d Duplex Nails: 18 each leg

4b



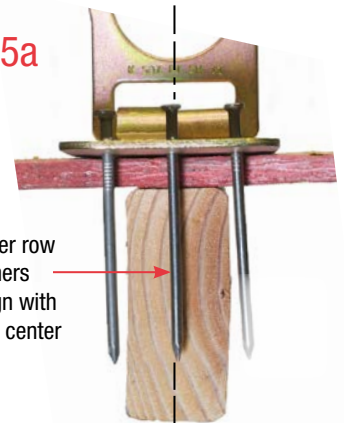
Center row



20-#12 x2-7/8" Hex Head screws: 10 each leg

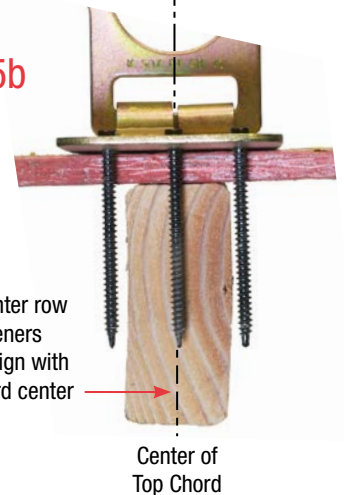
Fig.5a

Min. 7/16" sheathing



Leg center row fasteners must align with top chord center

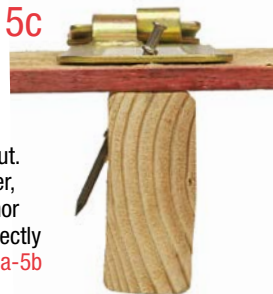
5b



Leg center row fasteners must align with top chord center

Center of Top Chord

5c



WARNING! Fastener blow out. Remove fastener, re-position anchor leg and install correctly as shown at Figs.5a-5b

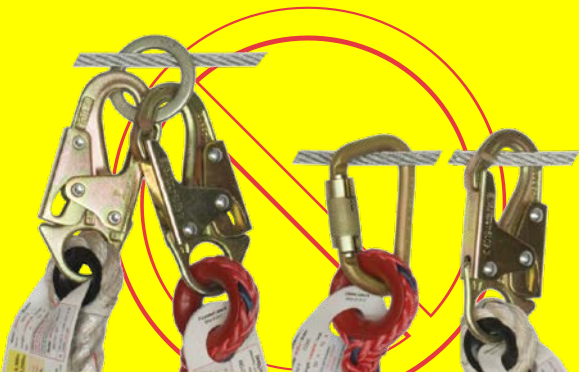
Replacement Bulk Packs

Fastener Type	Part No.	No. Pcs.	Driver No.
16d Duplex	2012-B	44/lb	Hammer
#12x2-7/8" hex	2009-B	55/lb	1/4" Hex 2010

Fig.6

WARNING! NON COMPATIBLE CONNECTIONS

Do not attach more than 1 connector to a connector ring or any connector directly to the cable.



Compatible Connections

Require connector to be attached only to the connector ring.



Fig.7a

7b

Installation/Framing Strength Requirement

The wood structure to which an anchorage device is attached must be capable of sustaining static loads applied in the direction of the fall hazard as follows:

- a) *2 times the engineered load or
- b) *5,000lb(22.5kN) without engineering.

Top Chords and Sheathing

Anchor ends must be installed onto framing sheathed with OSB or plywood with a min. thickness of 7/16" attached to a min. 2x4 top chord as shown at Fig.5a-5b.

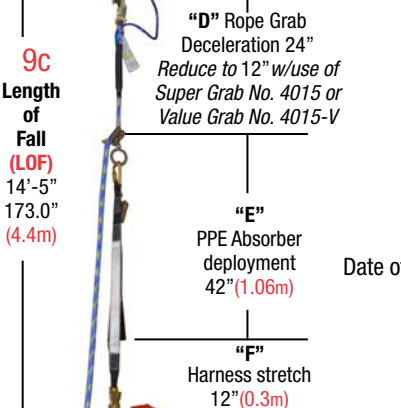
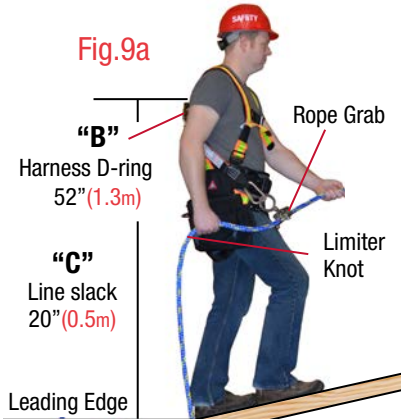
WARNING! Fastener Blow Out. Shown at Fig.5c, compromises the fastener strength rating. Prior to each use inspect underside of sheathing to confirm correct fastener installation.

*ANSI Z359.1-07section 7.2.3/OSHA 1910.66 App C(l)(10)

Components Deployment

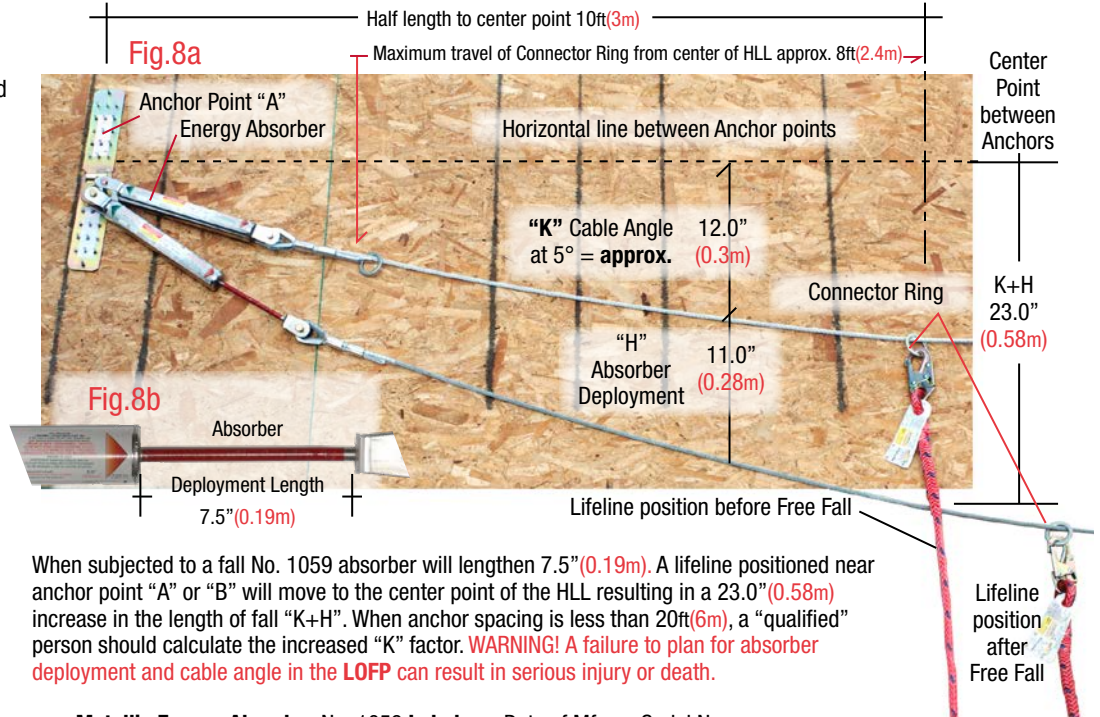
Length of Fall Plan (LOFP)

Components stretch and deceleration values are shown in the sample plan **Figs.8 and 9**. A **LOFP** specific to the equipment being used is required to prevent contact with the ground or lower level in the event of a free fall.



Calculating Energy Absorber Deployment Length and Cable Angle

Sample HLLS rigging for 20ft(6m) spacing between Anchors:



When subjected to a fall No. 1059 absorber will lengthen 7.5”(0.19m). A lifeline positioned near anchor point “A” or “B” will move to the center point of the HLL resulting in a 23.0”(0.58m) increase in the length of fall “K+H”. When anchor spacing is less than 20ft(6m), a “qualified” person should calculate the increased “K” factor. **WARNING! A failure to plan for absorber deployment and cable angle in the LOFP can result in serious injury or death.**

Metallic Energy Absorber No. 1059 Label

Date of Mfg. Serial No.

TENSION INDICATOR Consult instructions before tension adjustment. Green mark indicates maximum tension. INDICADOR DE TENSION CONSULTE EL MANUAL DE INSTRUCCIONES ANTES DE AJUSTAR LA TENSION. LAS MARQUES VERDES INDICAN LA TENSION MAXIMAL. INDICADOR DE TENSION Consulte las instrucciones antes de ajustar la tensión. La marca verde indica la tensión máxima.	WARNING! Read and understand all instructions before use. AVERTISSEMENT! Lire et comprendre toutes les instructions avant de procéder à l'installation et à l'utilisation. Model: No. 1059 Material: 316LSS Fall Indicator Deployment Max. FORCE POUR LE DEPLOIEMENT DE L'INDICATEUR DE CHUTE: 1,322lb (60k) Despliegue del Indicador de Caídas: 203mm	Mfg. Super Anchor Safety Monroe, WA 98272 USA 425-488-8868 M-Series HLLS Energy Absorber ABSORBEUR D'ENERGIE HLLS SERIE M Model: No. 1059 Material: 316LSS Fall Indicator Deployment Max. FORCE POUR LE DEPLOIEMENT DE L'INDICATEUR DE CHUTE: 1,322lb (60k) Despliegue del Indicador de Caídas: 203mm	FALL INDICATOR: ! WARNING! Inspect Before Each Use. If RED color is visible, DO NOT USE. Absorber has been deployed and must be removed from service. ATTENTION! Vérifier l'état de l'absorbeur avant chaque utilisation. Si la couleur rouge est visible, NE PAS UTILISER. L'absorbeur a été déployé et doit être mis hors service. ADVERTENCIA: Inspeccione Antes de Cada Uso. Si el color rojo es visible, NO LO USE. El Absorbedor ha sido desplegado y debe ser removido del servicio. Absorber Label M-1 032N 06-2017 Mfg. India
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HLL Labels

English 1.1 French 3.1 Inspection Label

Super Anchor Safety (SAS) Monroe, WA 98272 425-488-8868 HLLS No. 1321-CAN Horizontal Lifeline System Min. Tensile Strength 5,000lb(22.5k) Compliance: OSHA1926.502 Certified by a member of l'Ordre des Ingénieurs du Québec. Meets Safety Code for use in Québec. IMPORTANT WARNING! Consult HLLS manual shipped with this equipment at time of purchase or download current version from www.superanchor.com . Must pass inspection tests before each use. DOM Y/M	Super Anchor Safety (SAS) Monroe, WA 98272 425-488-8868 HLLS No. 1321-CAN Système de ligne de vie horizontale Résistance min. à la traction : 5,000lb(22,5k) Conforme aux normes OSHA1926-502 homologué par un membre de l'Ordre des ingénieurs du Québec. Conforme aux normes québécoises de sécurité. AVERTISSEMENT IMPORTANT ! Consultez le manuel d'instructions du HLLS fourni lors de l'envoi du dispositif ou téléchargez la version la plus récente disponible sur notre site Web au www.superanchor.com . Le dispositif doit passer avec succès les tests d'inspection avant chaque utilisation. Utilisation recommandée : installation temporaire sur des charpentes de bois. Protection contre les chutes : 2 pers. positionnement : 3 pers. Réacondo d'ancrage Hinge No. 3006 : Acier galvanisé de calibre 11 Espacement max. entre les ancrages : 20ft(6m) Câble métallique : acier galvanisé 3/8" x 7x19. Résistance à la rupture : 14,400lb(64kN). Absorbeur d'énergie pour câble métallique : SAS No. 1059 en acier inox-316. L'utilisation d'un absorbeur d'énergie avec l'EPI est requise pour chaque utilisateur.	Inspection Record Year: _____ Month: _____ By: _____ Pass Year: _____ Month: _____ By: _____ Pass
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Hinge No. 3006 Labels

English/Spanish French

Hinge™ No. 3006 Anchorage call. 11 En acier galvanisé Résistance à la traction min. 5,000lb(22,5k) Capacité : 1 personne 340lb(154kg) Cap. > 1 person 340lb(154kg) Mfg. Super Anchor Safety (SAS) Monroe, WA 98272 USA 425-488-8868 Fastener Hole Leg Centre WARNING! TO USE: Before installation or use consult instructions supplied with this device at time of purchase. Failure to follow instructions may result in serious injury or death. USE OF ENERGY ABSORBER REQUIRED. ADVERTENCIA PARA EL USUARIO: Antes de la instalación o el uso consultar (SAS) las instrucciones suministradas con este dispositivo en el momento de la compra. Si no se siguen instrucciones puede resultar en lesiones graves o la muerte. USO DE ABSORBEDOR DE ENERGIA ES NECESARIO. INSTALLATION: Install over min. 7/16" OSB or plywood sheathing. Consult manual for structural framing requirements and fastener specifications. For Fall Arrest use, position "Leg Center" holes over center of a min. 2x4 top chord and secure with SAS specified fasteners. INSTALACION: Instalar sobre mínimo OSB de 7/16" o sobre carpintería de madera. Consulte el manual de instrucciones para los requisitos de la estructura y asegure con sujetadores SAS especificados. FASTENERS: Use SAS certified fasteners and do not substitute with other types. Sujetadores: Utilizar sujetadores certificados por SAS y no sustituirlos con otros tipos. INSPECTION: Follow manual inspection requirements before each use. Remove from service if evidence of damage. INSPECCION: Siguir los requisitos de inspección manual antes de cada uso. Retirar del servicio si hay evidencia de daños. Compliance: OSHA 1926.502/1910.66 ANSI Z59.1-07/10/12-2012 Certified by a member of l'Ordre des Ingénieurs du Québec. Meets Safety Code for use in Québec. Always Inspect Before Use Inspeccione Siempre Antes de Utilizar Hinge Label English-Spanish 3.0 032N 06-2017 mfg. China	Hinge™ No. 3006 Anchorage call. 11 En acier galvanisé Résistance à la traction min. 5,000lb(22,5k) Capacité : 1 personne 340lb(154kg) Mfg. Super Anchor Safety (SAS) Monroe, WA 98272 USA 425-488-8868 MESE EN GARDE : Avant l'installation ou l'utilisation du dispositif d'ancrage, consultez le manuel d'utilisation fourni lors de l'achat, et a risque de blessures ou de la mort si les directives ne sont pas bien suivies. ABSORBEUR D'ENERGIE REQUIS. INSTALLATION : Installez l'ancrage sur du contreplaqué ou un panneau OSB d'une épaisseur d'au moins 7/16". Consultez le manuel afin de connaître la résistance requise de la charpente et des fixations. Protection contre les chutes : veuillez placer les trous du centre de la patte au-dessus du centre de la membrure supérieure 2x4 min. Trous pour fixations Centre de la patte FASTENERS : N'utilisez que les fixations SAS homologuées. Ne remplacez pas les fixations par d'autres types de fixations. INSPECTIONS : Pour les procédures d'inspection, suivez les exigences décrites dans le manuel avant chaque utilisation. Mettez le dispositif hors service s'il y a un signe de dommages. Conforme aux normes OSHA 1926.502/1910.66 ANSI Z59.1-07/10/12-2012 Homologué par un membre de l'Ordre des ingénieurs du Québec. Conforme aux normes québécoises de sécurité. Toujours inspecter le dispositif avant chaque utilisation. Hinge Label French 4.0 032N 06-2017 Fab. China
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SAMPLE LENGTH OF FALL PLAN

- 1) Free fall length "A" 72" (1.8m)
 - 2) Rope grab "D" 24" (0.6m)
 - 3) Absorber "E" 42" (1.06m)
 - 4) Harness "F" 12" (0.3m)
 - 5) Cable Angle 5° "K" 12" (0.3m)
 - 6) Absorber "H" (8b) 11" (0.28m)
 - 7) Ground "G" 52" (1.3m)
- Total (LOFP) 225" (5.7m)**

WARNING! IN THE EVENT A FALL OCCURS:
Prompt Rescue: A plan for immediate rescue is required to avoid serious injury or death from suspension trauma. Fit harnesses w/SAS No. 6060 Trauma Strap and train workers in its use.
Ground Clearance: A failure to calculate the LOF + ground clearance and correctly rig PPE can result in striking the ground or a lower level and may cause serious injury or death.