

tirak

Scaffolding Hoist

TE401P / TE401PA

TE 1000 P / TE 1001 P / TE 1020 P / TE 1021 P

Operating and Maintenance Manual



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W A R N I N G !
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Only authorized, properly trained,
and physically fit personnel
shall operate this hoist.

Before using this equipment
read and fully understand this manual.

Any use of this equipment
other than in strict accordance
with these instructions
as well as all applicable safety codes
shall be at operator's and user's own risk.

Serious injury may result to user and others,
if these instructions are not strictly followed.
Safety is the responsibility
of both the operator and the employer.

These instructions
must be kept with the TIRAK hoist
for ready reference
when operating the equipment.

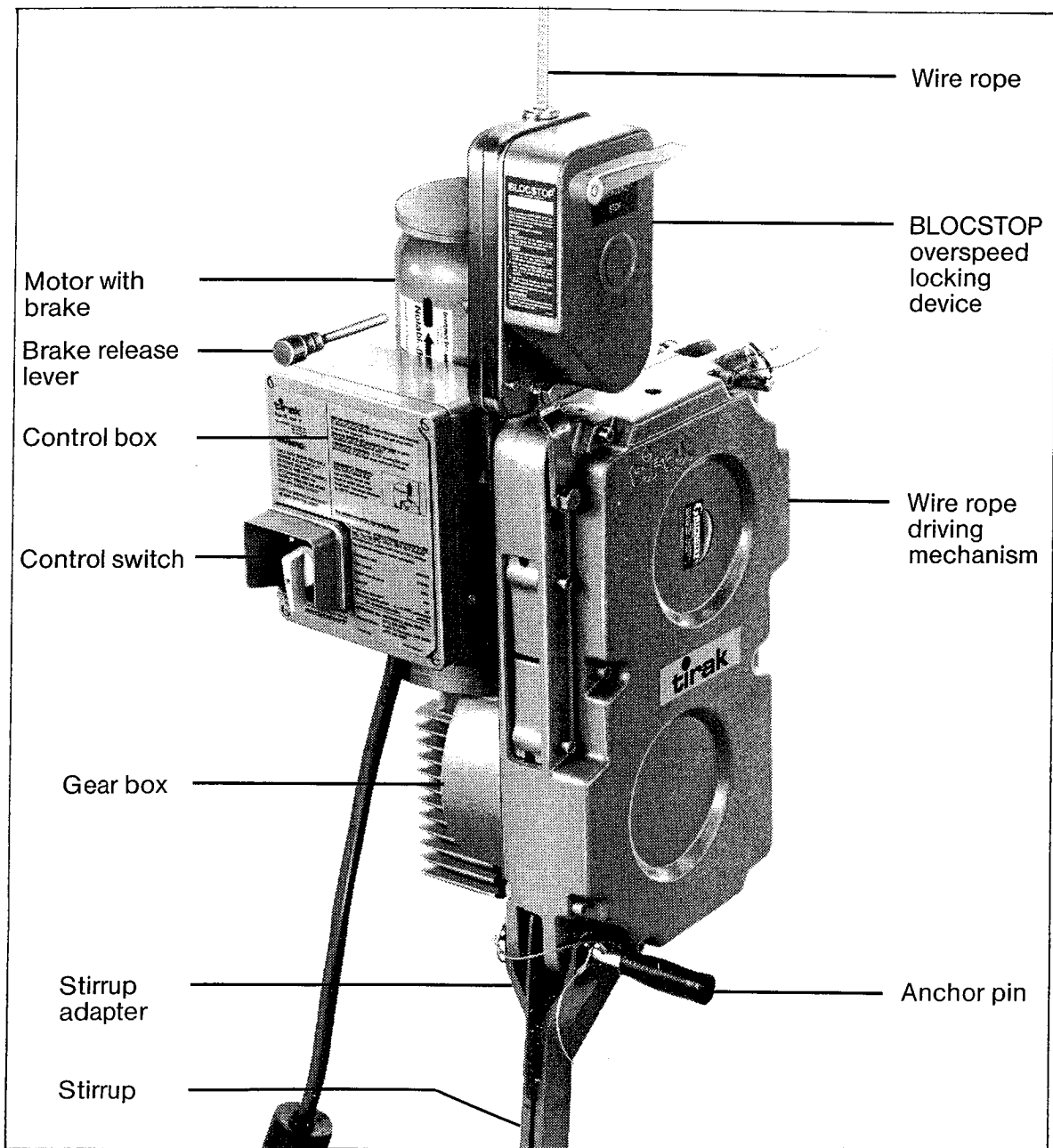
1. G E N E R A L

The TIRAK Wire Rope Scaffolding Hoist has been designed according to an entirely new principle. Same as the GRIPHOIST machines, it can be used without any limitation of length for lifting.

Its advantages for facade jobs:

Powerful, fast, and lightweight.
Simple, robust, and reliable.
And gentle for its wire rope.

Figure 1

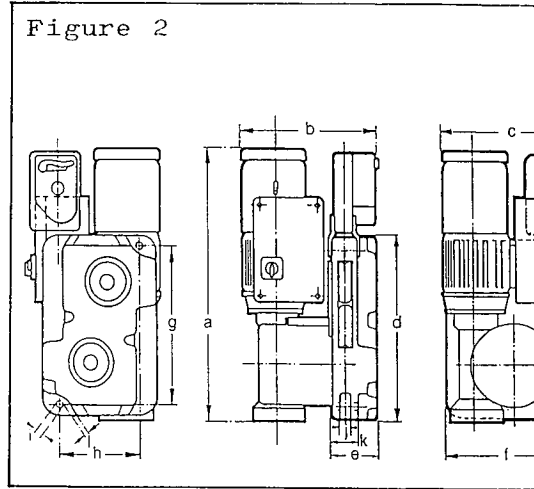


2. DESCRIPTION

2.1 Technical Data

Technical Specifications
Standard Models

	Useful dimensions for fastening TIRAK hoists (in.)					
	g	h	i	j	k	l
T-400 series	13.4	7.3	0.6	1.0	2.2	0.6
T-1000 series	17.7	10.0	0.6	1.0	2.2	0.5



Model	TE-401 PA TE-401 P	TE-1000 P	TE-1001 P	TE-1020 P	T 102
Admissible load/man riding lbs	1,000	1,500	1,500	2,000	2,0
Lifting speed ft/min	35	35	17	35	1
Weight (complete with BSO) lbs	144	174	194	174	19
Dimensions in.					
over all (with BSO) a	24.5	30.0	30.0	30.0	30
b	12.4	12.4	12.4	12.4	12
c	13.0	13.0	16.5	13.0	16
wire rope d	15.0	20.0	20.0	20.0	20
mechanism e	3.7	3.7	3.7	3.7	3
f	10.0	12.6	12.6	12.6	12
Motor specifications:	electrical motor				
3-phase 220 V 60 cycles kW	-	2.2	-	2.2	
single phase					
110 or 220 V 60 cycles kW	1.1	-	1.1	-	1
Wire rope specifications type	C8	C8	C8	C9	
diameter in.	5/16	5/16	5/16	3/8	3
min. breaking strength lbs	9,000	9,000	9,000	12,000	12,
construction	4x26 or 6x19 IWRC, galvanized, preformed IPS				

2.2 Motor and Primary Brake

The TIRAK is driven by a single phase or three phase electric motor, totally enclosed fan cooled (TEFC) type with an electromagnetic brake.

2.3 Gear Reducer

The gear reducer consists of a worm gear drive in connection with a planetary gear (T-400 series) or spurgear (T-1000 series), oil bath lubricated in a sealed aluminium casing.

2.4 Secondary Brakes

The electric driven TIRAK hoists are equipped with a centrifugal brake, warranting a descent at moderate speed in case of current failure.

The additional overspeed locking device (D) stops the descent immediately in case of accelerating overspeed. It must always be attached and used.

2.5 Wire Rope Driving Mechanism

The patented wire rope driving mechanism consists of two clamping discs and the wire rope guiding.

A clamping disc is formed by a drive disc and a pressure ring, pressed to

each other by predetermined heavy duty springs. The wire rope is held in an "U"-shaped groove between drive disc and pressure ring.

Drive disc and pressure ring are slightly inclined with respect to each other by means of a spreading roller. Thus the clamping force is progressively increased at the wire rope entry and decreased at its exit, to warrant maximum lifetime of the wire rope.

The two clamping discs are engaged with each other by means of spur gear teeth at their peripheral edges.

The wire rope winds in an "S"-shaped path around the two clamping discs and leaves the hoist on the side opposite to its entry. As it is not stored inside the hoist, its length (i.e. the possible rope travel) is unlimited on principle.

The whole mechanism is housed in an aluminum casing.

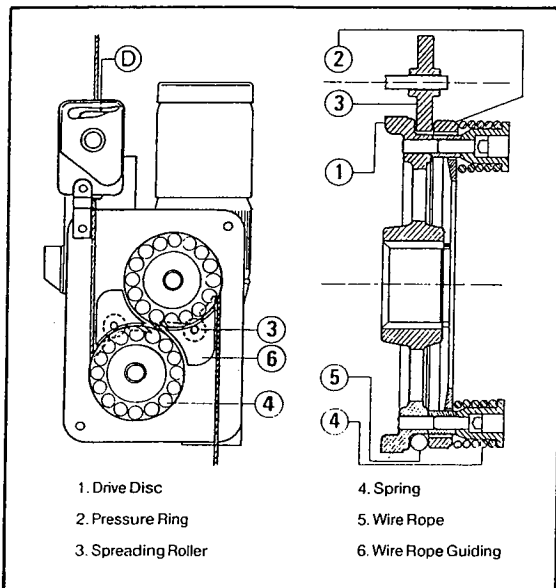


Figure 3

2.6 Wire Rope

The TIRAK 1,000 and 1,500 lb. hoists are principally supplied with GRIPHOIST Wire Rope, with 5/16" diameter.

Other than GRIPHOIST Wire Rope may be used only if expressly specified by GRIPHOIST INC.

The 2,000 lb. hoists use 3/8" diameter wire rope.

NOTE: The manufacturer declines all responsibility for machines used with a wire rope other than specified by GRIPHOIST INC.

3. SET-UP AND OPERATION

3.1 Power Supply

- (1) Check if voltage indicated on the motor-nameplate corresponds to power supply rating.
- (2) The single phase motor is factory connected for 230 VAC. For 115 VAC attach 125 V, 20 A plug and change switch inside control box to 115 V position.
The three phase motor is factory connected for 220 V, 3 ϕ .
- (3) It is important to note that SINGLEPHASE motors are more sensitive to overloading and voltage drop than three phase motors. Therefore never exceed maximum admissible load and see to it that the 115/230 VAC power supply is always available.
In case of difficulties read voltage at motor terminal during lifting operation. Especially for high lifting operations, which require long leads, it is essential to use power cords of sufficient size (see par. 3.3).



WARNING:

Never operate hoist or other electric equipment in a potentially explosive atmosphere around distilleries, refineries, chemical plants, ship or silo interiors. Always obtain official approval before commencing operations at these or similar locations.

Contact GRIPHOIST for PNEUMATIC TIRAK

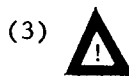
3.2 Fuses

Check if specification of fuses, which protect electrical equipment, corresponds to the amperage indicated on machine nameplate.
The minimum service requirements hoist are:

Monophase	Three phase	amps.
115 V	220 V	30
230 V		20

3.3 Power Cords and Grounding

- (1) To prevent voltage drop exceeding the allowable 10% we recommend using power cords with sufficient cross section (table 3.1 and 3.2). To minimize voltage drop due to power cord length on high lifts, select an outlet at the halfway point. This will reduce the total power cord length on the job.
- (2) In some extreme cases, a booster transformer will be needed to compensate for power cord losses as well as initially low-source voltage. If a booster transformer is needed, call GRIPHOIST.



WARNING:

DO NOT OPERATE THE HOIST FOR ANY REASONS, IF THE MEASURED RUN VOLTAGE AT THE MOTOR IS LESS THAN 90% OR MORE THAN 110% OF STATED RATINGS!

- (4) Always secure the power cord to the scaffolding with a strain relief fitting, so the cord weight will be off the connector.
- (5) When finished for the day, make certain the power cord is disconnected at the hoist pigtail as well as at the main outlet.
- (6) Be sure to ground all electrical equipment.
Do not use wire rope as a ground.

Operating with 115 VAC Single Phase Motors			
Power Cord Length (ft)	Power Cord for 1 TIRAK		For 2 TIRAK use separate cord for each TIRAK!
	Required Conductor Cross Section	AWG Gauge No.	
60	2.5 mm ²	14	
150	6 mm ²	12	
300	10 mm ²	10	

Table 3.1

Operating with 230 VAC Single Phase or 220 V Three Phase Motors				
Power Cord Length (ft)	P.Cord for 1 TIRAK		P.Cord for 2 TIRAK	
	Required Conductor Cross Section	AWG Gauge No.	Required Conductor Cross Section	AWG Gauge No.
60	1.5 mm ²	14	1.5 mm ²	14
150	1.5 mm ²	14	2.5 mm ²	12
300	2.5 mm ²	12	4 mm ²	10
600	6 mm ²	10	10 mm ²	8

Table 3.2

3.4 TIRAK Control

The TIRAK Control is effected either by means of a "two-way" switch or by pushbuttons, which automatically return into STOP-position, when not activated.

Pushbutton controls are equipped with an EMERGENCY-STOP button (Fig. 4).

DO NOT tie off pushbuttons or hoist switch in run position or mechanically interconnect two or more hoists to be run by a single control, as this is forbidden by safety codes.

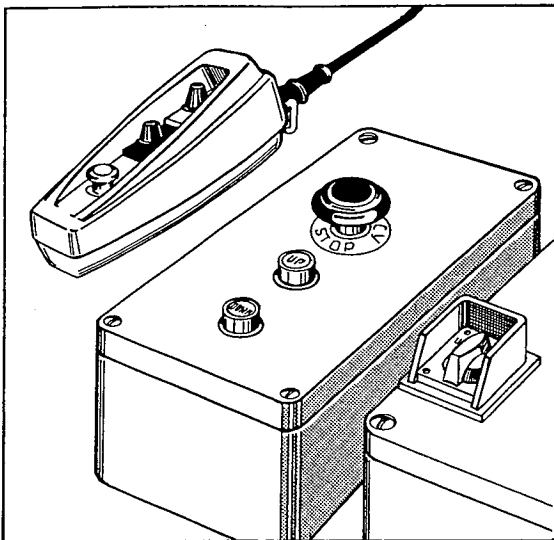


Figure 4

3.5 TIRAK Mounting

Bolt TIRAK - motor upside - to scaffolding stirrup using stirrup adapter, which also holds the TIRAK in its upright position.

⚠ WARNING: The TIRAK must
be guided by the stirrup or
other suitable means such that
wire rope fixing point, rope
inlet and TIRAK anchoring point
are in line (Fig. 5).

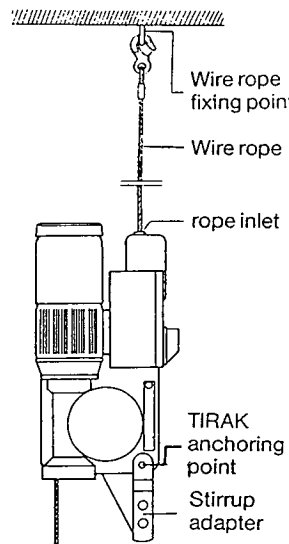


Figure 5

3.6 Rigging

(A) Anchoring Methods

NOTE: Before choosing an anchoring method, parapets and roof conditions must be inspected for structural integrity by a competent and experienced person.

(1) Cornice Hook

Insure that the cornice hooks are directly above the intended positions of the TIRAK hoists.

For details see figs. 6.1/6.2.

NOTE: All anchoring devices must be secured to a structurally sound portion of building by a tieback having equivalent strength to the hoisting rope.

Figure 6.1

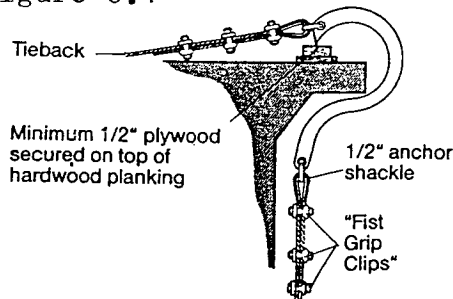
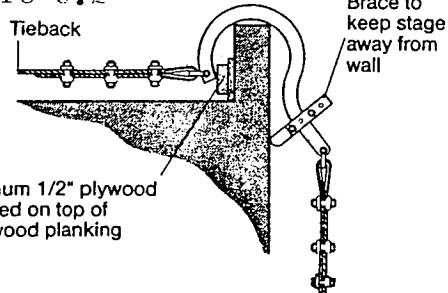


Figure 6.2



(2) DELTA-Beam and Counterweight System

The DELTA-Beam and Counterweight System can be adjusted to various location conditions. The telescopic beam reaches from 5.5 to 18 feet from the support point. Maximum overhang is 3 feet.

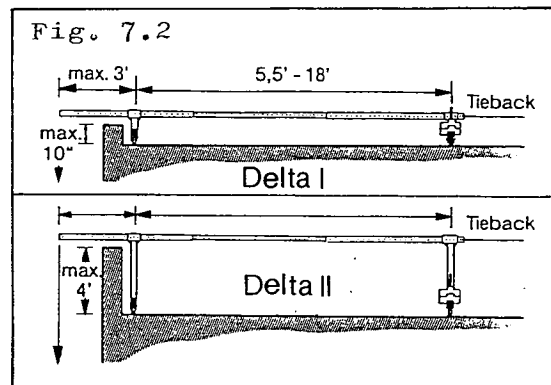
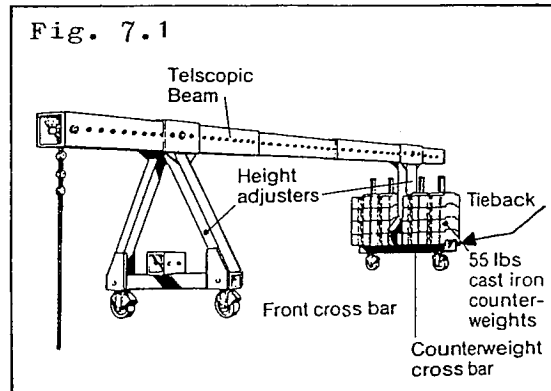
Always make certain that the floor or the roof structure can safely sustain the loads of the counterweights, the beam and the scaffold, including reaction at the building edge.

For parapets up to 4' height use the front/rear height adjuster. For easier movement the cross bars are furnished with wheels. (Figs. 7.1/7.2)

Insure that the DELTA-Beams are directly above the intended position of the TIRAK hoists. Adjust rear part of the beam to location conditions.

NOTE:

The longer it is (max. 18'), the lower is the required counterweight. Securely bolt all parts and lock the wheels.



! Assembly:

**** WARNING: Never exceed 3' overhang under any circumstances. Consult GRIPHOIST INC. for such conditions, which must be treated on an individual basis involving possible different materials, or methods. ****

Control overhang distance and measure length "b" from support point to center of counterweight cross bar. Slide required counterweights "W" or poles of the counterweight cross bar equally on each side of the beam. Prevent removal of counterweights by blocking with cotter pins.

FORMULA FOR CALCULATING COUNTERWEIGHT

max. load (L) per beam	max. permissible overhang (a)	
	DELTA type I / II	III
1,000 lbs	3 ft	5,5 ft
1,500 lbs	—	4 ft
2,000 lbs	—	3 ft

W = counterweight (in pounds)
 L = load (in pounds)
 a = overhang
 b = distance between fulcrums A and B

$$W = \frac{(La) 4}{b}$$

or

$$b = \frac{4(La)}{W}$$

NOTE:

All anchoring devices must be secured to a structurally sound portion of building by a tie-back having equivalent strength to the hoisting rope.

boards on all open sides of the scaffold platform in accordance with OSHA regulations and state or local codes. It is of utmost importance that you use these components in the erection and use of the scaffolding equipment.

NOTE:

THE USE OF ANY SCAFFOLDING EQUIPMENT IS UNSAFE AND UNLAWFUL WITHOUT:

- b) Safety belts or harnesses, life lines, and lanyards provided by you and used in accordance with the requirements of OSHA regulations and state or local codes.

- a) Guardrails, midrails, and toe-

(B) Wire Rope Installation

- (1) Use only GRIPHOIST specified wire ropes! 4 x 26 or 6 x 19 IWRC galvanized preformed IPS. 3/8" or 5/16" diameter, as required by model number. The wire rope must have a minimum safety factor of 6:1.

- (2) Install rigging as shown. If other methods are used for suspension of the scaffolding, be sure that they are made with proper rigging connections and are capable of safely supporting the maximum dead and live loads with a minimum safety factor of 4:1.

(3) RIG FROM TOP

You should have enough wire rope to reach to the ground with about five feet extra for ensuring safety.

Always un-reel and reel wire rope in a straight line (see fig. 8) to prevent kinks, which make it unusable for the TIRAK.

- (4) Install heavy duty thimble with a minimum of three (3) "Fist Grip Clips" (see fig. 9).

- Apply first clip approximately 7" from thimble. Tighten nuts moderately.

- Attach second clip as close to thimble as possible. Leave nuts loose.

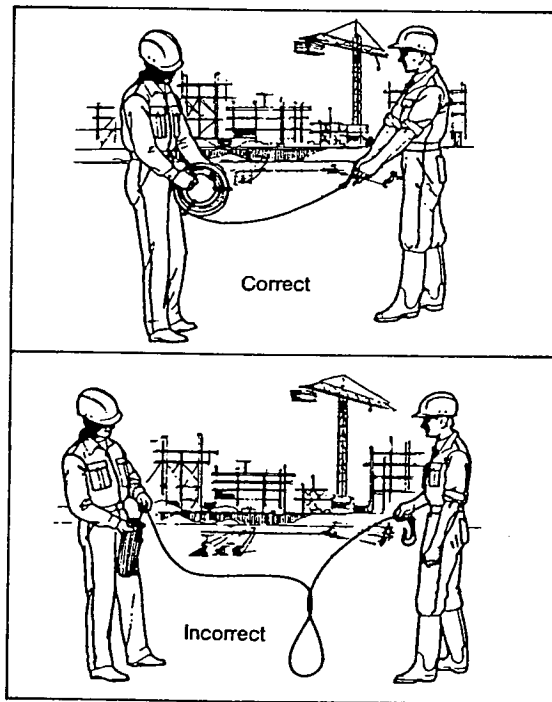
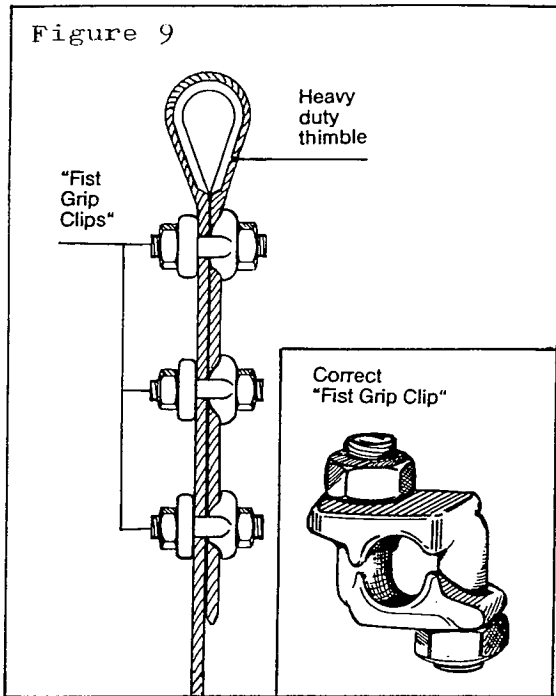


Figure 8

- Attach the third clip half-way between first and second clips, leaving the nuts loose. Take up wire rope slack.
- Tighten nuts evenly on all clips (approx. 30 ft-lbs. torque).
- Inspect fastening periodically. In use, wire ropes will stretch and reduce in diameter. Retighten all "Fist Grip" nuts periodically.

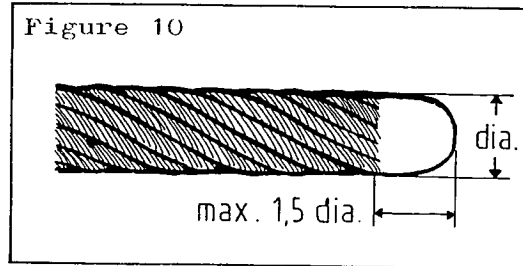
- (5) Attach thimbled wire rope to rigging with a 2 ton (1/2") anchor shackle, or a shackle specifically designed for use with DELTA-Beam outrigger.



- (6) Store any extra wire rope on the roof, coiled and tied off to prevent damage to wire rope.

(7) Wire rope insert into TIRAK

Check wire rope tip to be in perfect condition and welded round like shown in fig. 10.

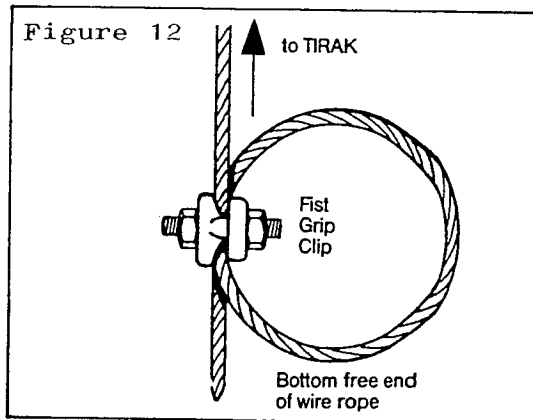
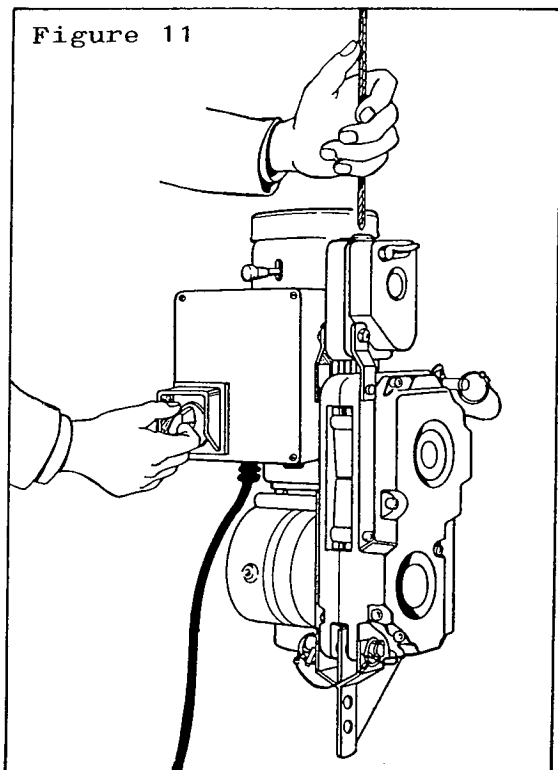



Push the rope through the overspeed device and introduce into the TIRAK rope inlet. Push inside as far as possible and turn the TIRAK operating handle in "UP"-position. The wire rope must reeve itself and exit on the other side.

NOTE: Make sure that the wire rope exit is not blocked in any manner

- (8) After reeving through the hoist be sure to loop and clamp the bitter end of the wire rope, to prevent the rope from inadvertently unreeving through the hoist.

Always tie this loop, using a fist grip clip, when the stage is at ground level.



**  WARNING: **
** At every set-up or rerigging **
** check the wire rope ensuring **
** to reach the ground with about **
** five feet extra for safety. **

3.7 Operating

(1) GENERAL

BE FAMILIAR with the equipment and its proper care.

DO NOT operate hoist, if adjustment or repairs are necessary, if any warning, operating, or capacity instructions normally attached to the hoist are obscured, damaged, or missing.

REPORT same promptly to the proper person and also notify next operator, when changing shifts.

(2) For UP and DOWNWARD MOTION of the scaffolding just turn the control handle into the corresponding direction.

(3) NOTE: Safety demands that you test out the system before going aloft:

CHECK SCAFFOLDING fully rigged and loaded by cycling UP and DOWN several times near ground level.

CHECK BRAKE for mechanical function: When stopping the TIRAK the load must be held immediately.

If the entire system is anchored solidly, and is running smoothly, start operation.

CONTINUOUSLY CHECK rigging, lines, clearances, and all other elements throughout the entire time on the job.

(4) When operating scaffolding, take care to operate hoists so that the scaffolding stays level without tilting one end more than the other.

(5) W A R N I N G S



will cause more serious damage!
CONTACT GRIPHOIST INC:!

DO NOT tie off control switch or push buttons in run position or mechanically interconnect two hoists to be run by a single switch, as this is forbidden by safety codes.

IN CASE OF AN INCIDENT involving injury or property damage, contact GRIPHOIST INC. immediately.
DO NOT disturb, alter, or move any equipment at the scene of the incident.

DO NOT operate the hoist, if it is functioning improperly or damage is noted.

Operating in explosive atmosphere

- Never operate hoist or any other electric equipment in a potentially explosive atmosphere - such as around distilleries, refineries, chemical plants, ship or silo interiors. Always obtain official approval before commencing operations at these or similar locations.

NEVER pick up a load beyond the rated capacity appearing on the hoist.

STOP OPERATIONS IMMEDIATELY, if at any time, when the TIRAK operates, wire rope does not move (i.e. no UP or DOWN travel). It is likely that damaged wire rope is jamming the hoist. Continued operation

Contact GRIPHOIST for PNEUMATIC TIRAK!

(6) Special Operating Notes for Welding

- Always protect your equipment and yourself from the danger of arcing.
- Be sure cornice hooks and outriggers are grounded to prevent arcing across wire rope to protruding structures.
- Do not use wire rope as a ground for welding.

- Do not allow your welding gun to contact wire rope, hoist, or any other metal equipment or structure.
- Protect work area above and below hoist with insulation. Split a section of air rubber hose and wrap around wire ropes.

3.8 Emergency Descent

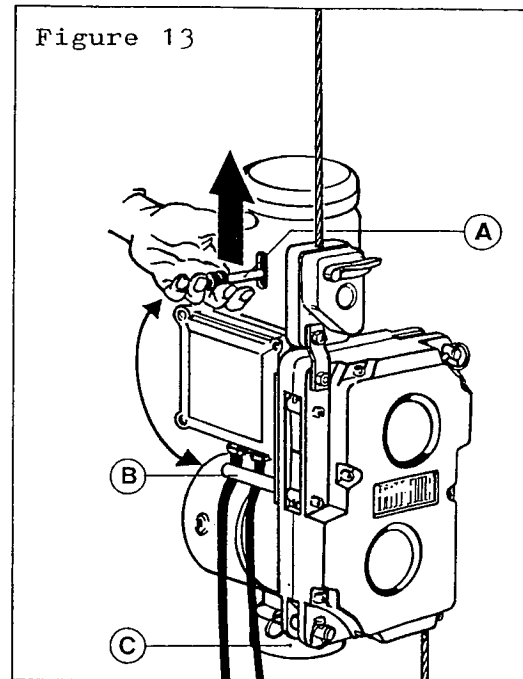
In case of current failure you can descend with the scaffolding proceeding as follows:

- (1) Take the brake release lever (B) out of TIRAK carrying handle (A). Insert it into the motor fan cover hole. Push it in arrow direction.

The TIRAK begins to lower at moderate speed, which is regulated by the incorporated centrifugal brake (C).

- (2) To STOP just release the lever.
- (3) After use restore brake release lever into carrying handle.

** WARNING: **
** Do not use emergency descent as **
** regular technique to descend **
** the scaffolding. **

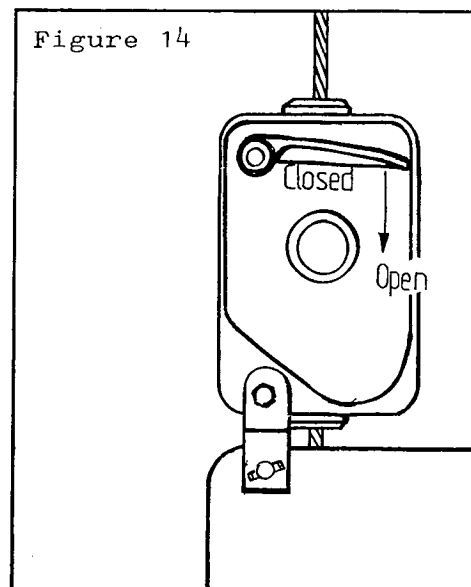


3.9 Overspeed Brake Action

When the overspeed BLOCSTOP has been activated, proceed as follows:

- (1) STOP downward travel.
- (2) Raise the scaffolding until the TIRAK hoist supports the load.
- (3) Push the control lever of the overspeed BLOCSTOP in OPEN position.
- (4) Continue with descent.

If the overspeed BLOCSTOP repeatedly stops downward travel, contact GRIP-HOIST INC. for advice.



4. TROUBLE SHOOTING

4.1 Motor Troubles

Defect	Cause	Remedy
1. Motor does not run at all.	a) Current failure	a) Check fuses, power cords, connections, and starting capacitor.
	b) Incorrect wiring	b) Compare wiring with wiring diagram.
2. Motor does not start under load	a) Overload	a) Check load and reduce, if necessary.
	b) Brake not released	b) Check motor with brake released by hand. Check brake according to para. 3.7 (3), page 12.
	c) Voltage drop	c) Check voltage when running the motor. Use power cord(s) with higher cross section.
	d) Incorrect wiring	b) Compare wiring with wiring diagram.
3. Motor stalls under load.	Low voltage	Check voltage when running the motor. Use power cord(s) with higher cross sections.
4. Overheating when running without load	a) Insufficient cooling	a) Clean motor fan cover.
	b) Incorrect wiring	b) Compare wiring with wiring diagram
	c) Voltage too high	c) Check voltage and no-load current
	d) Short current in the coil	d) Contact GRIPHOIST INC.
5. Overheating	a) Overload	a) Check load and reduce if necessary.
	b) High or low voltage	b) Check current consumption and compare with motor label specifications. Check current and voltage. Check power cords.
	c) Starting capacitor still activated. Centrif. switch defect.	c) Check current at the auxiliary winding in the control box, when running the motor. For centrifugal switch repair contact GRIPHOIST INC.
	d) Rotor sliding on stator, crooked shaft.	d) Contact GRIPHOIST INC.
	e) Brake not (correctly) released.	e) Check brake air gap acc. para. 4.2. Check rectifier. Check voltage at the brake coil.
6. Abnormal motor noises	a) Electric parts (noise disappearing immediately, when switching off motor)	a) Causes and remedies see above 1. to 5.
	b) Mechanical parts (noise "continuous" until hoist stands still)	a) Contact GRIPHOIST INC.

4.2 Brake Troubles

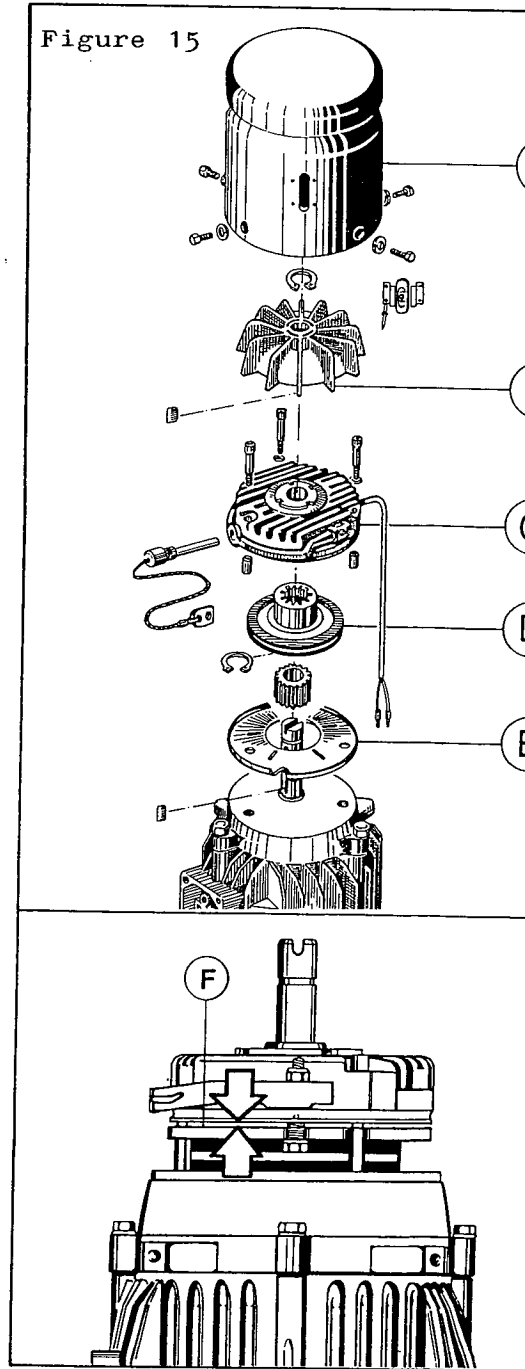
- (1) If the brake does not function electrically (lack of "click" switch noise, when starting/stopping the TIRAK), check
- rectifier,
 - current passage in the brake coil,
 - connections.

If you cannot find the trouble's cause, contact GRIPHOIST INC.

- (2) If the brake does not open at all: check the air gap (F) proceeding as follows:
- a) Remove fan cover (A).
 - b) Remove snap ring and fan (B).
 - c) Measure the clearance (F) with feeler gauges at different places around the brake. The proper clearance is 0.2 mm.
 - d) If the clearance is greater than 0.4 mm remove the brake coil (C) and exchange brake disk (D).*
 - e) Replace brake coil (C) and check the air gap at several places for uniform 0.2 mm spacing.
 - f) Replace fan and snap ring (B) and cover (A).
 - g) Check the brake.

* For TIRAK beginning with serial No. 4581 (TE 401 P) and 3793 (TE 1000 P series). For brake adjustment on older machines call GRIPHOIST INC. for special instructions.

Figure 15



4.3 Wire Rope Drive Mechanism Troubles

STOP OPERATIONS IMMEDIATELY, if at any time, when the TIRAK operates, wire rope does not move (i.e. no UP or DOWN travel).

It is likely that damaged wire rope jamming the hoist. Continued operation will cause more serious damage.

Contact GRIPHOIST INC.

5. INSPECTIONS, PREVENTIVE MAINTENANCE, TESTING

A preventive maintenance program should be initiated for each hoist immediately after it is entered into service.

This preventive maintenance program should comply with recommendations in the applicable parts and Instruction Manual, and all pertinent Federal, State, and Local regulations.

Regular inspections, maintenance and testing required should be followed for the life of the hoist and written inspection records kept as specified.

Sample inspection check lists are included in back of this manual and other applicable service guides and manuals. Extra inspection check lists can be obtained from your nearest authorized distributor.

5.1 Inspections

(1) Daily Inspections

EACH DAY PRIOR TO USE AND DURING OPERATION CHECK:

a) Brake function

b) BLOCSTOP Overspeed function

Turn the control knob in OPEN position. Push EMERGENCY STOP button. The jaws should close automatically.

During operation regularly check through the window that the centrifugal weights are rotating.

c) Wire rope wear (free of kinks, cuts, broken wires, birdcages, heat damage, contamination etc.)

d) Wire rope corrosion due to acid or caustics. Replace wire rope if exposed to these contaminants.

e) Wire rope lubrication. The wire rope has to be lightly lubricated and clean.

f) Type of wire rope. Use only GRIPHOIST specified wire rope, 5/16" or 3/8", 4x26 or 6x19 IWRC, galvanized, preformed, improved plow steel as required by model no.

g) Rigging. "Fist grip clips", hooks, outriggers, counterweight, tiebacks.

"Fist grip clips", a minimum of three (3) torqued to 30 ft-lbs. Apply maximum admissible hoist load and daily retorqued clips to 30 ft-lbs, as wire rope will stretch and reduce diameter under load.

Counterweights with attachment to prevent unauthorized removal.

Tie back cornice hooks and outriggers to an adequate structural member.

Safety belts and independently suspended safety lines must be used all times.

h) Check for part damages.

(2) Monthly Inspections

a) All items under daily inspection.

b) Wire Rope Inspection

All wire ropes should be inspected once a month and a signed and dated inspection record maintained. The inspection check list at back of this manual can be used to record these inspections.

WIRE ROPE SHOULD BE REPLACED, IF ANY OF THE FOLLOWING CONDITIONS ARE NOTED:

Broken wires or strands.

Kinking, crushing, birdcaging, or any other distortion of the wire rope structure (fig. 16).

Excessive corrosion.

Heat damage, evident through discolored wires.

Reduction from nominal diameter of more than 10%.

How to measure wire rope:

The correct diameter of the wire rope is the diameter of the circumscribed circle, which will enclose all strands. It is the largest cross-sectional measurement as illustrated in Fig. 17.

The measurement should be made carefully with calipers. The illustration shows also the correct and incorrect methods of measuring the wire rope diameter.

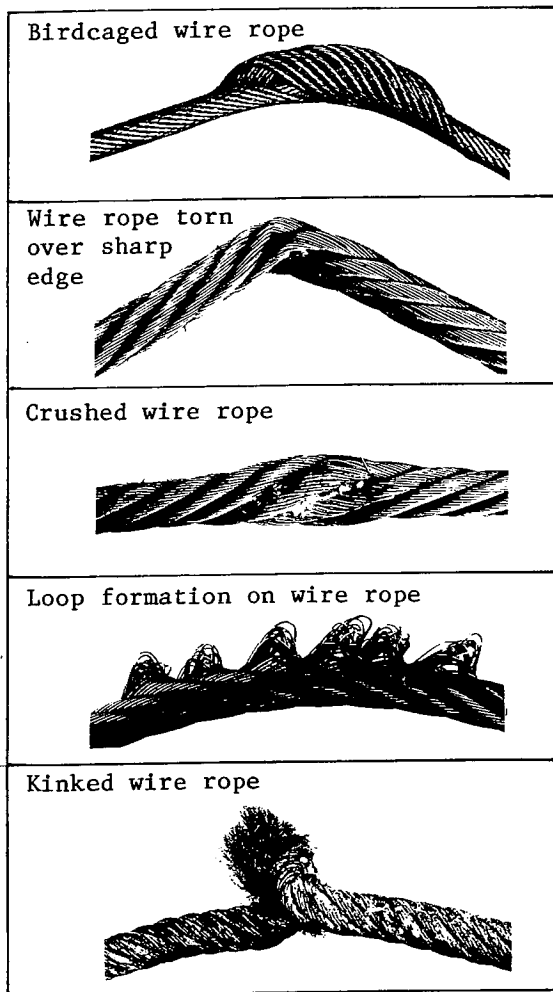


Figure 17

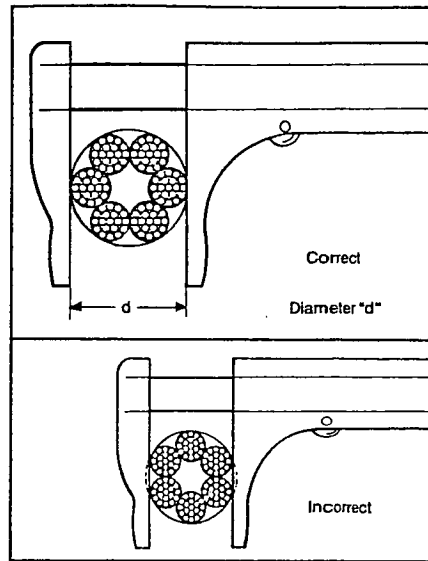



Figure 16

 **  WARNING: **
 ** REPLACEMENT WIRE ROPE MUST BE **
 ** THE SAME SIZE, GRADE, AND CON- **
 ** STRUCTION AS THE GRIPHOIST SPE- **
 ** CIFIED WIRE ROPE FOR THE HOIST **
 ** IN USE! **
 ** **
 ** THE MANUFACTURER DECLINES ALL **
 ** RESPONSIBILITY FOR MACHINES **
 ** USED WITH OTHER NONSPECIFIED **
 ** WIRE ROPES. **
 ** **

(3) 1/2 Year Inspection

The TIRAK should be examined every 6 months by GRIPHOIST INC. or a repair shop agreed by him. If it is necessary to change the gear box oil, take:

0.7. to 0.8 l for TIRAK TA 400 P,
 0.9 l for TIRAK TA 1000 series.

Use one of the following oils:

- SHELL SPIRAX HD 90
- BP HYPOGEAR EP 90
- TEXACO MULTIGEAR LUBRICANT EPS 80W90

5.2 Preventive Maintenance

(1) TIRAK Hoist

Besides the daily checks of the electromagnetic brake and for visible part damages:

Keep wire ropes clean and lightly lubricated to prevent abnormal wear of the wire rope driving mechanism.

(2) Wire Ropes

- a) Use only 5/16" or 3/8" as required, 4x26 or 6x19 IWRC, galvanized, preformed, improved plow steel wire ropes, which meet the GRIPHOIST specifications.

This will ensure the reliable function of the TIRAK hoist.

- b) To warrant maximum lifetime we recommend:

- The wire rope must be un-reeled and reeled in a straight line (s. fig. 18).
- Keep wire ropes clean.
- Lubricate wire ropes regularly with a rag soaked with oil.
- Never let the wire ropes rub against sharp edges.
- Always see that the wire rope outlet is not obstructed.
- Let the free wire rope end untwist to prevent wire rope from making loops.

(3) BLOCSTOP Overspeed Brake

Besides the daily checks, when the BLOCSTOP is disengaged, its function can be checked as follows:

- Insert wire rope from the topside and push until it comes out of the unit.
- Hold wire rope topside, release the BLOCSTOP, and allow it to free fall. The jaws should actuate and lock on the wire rope with a travel less than four inches.
- Repeat check a minimum of three times.

If the BLOCSTOP malfunctions, it has to be replaced.

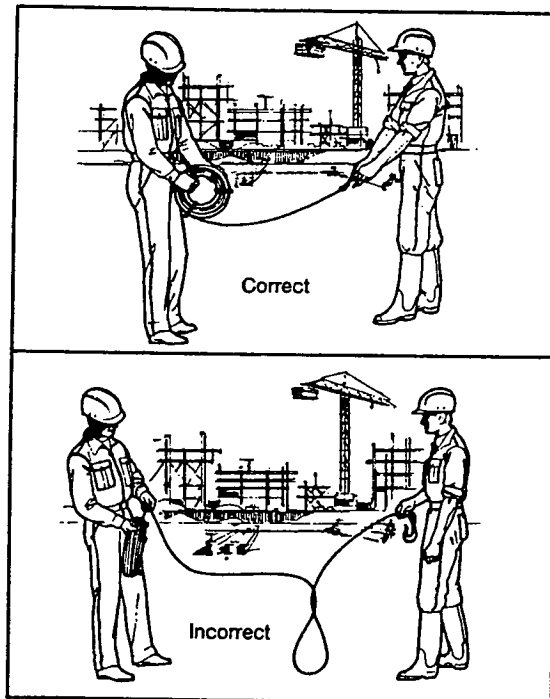


Figure 18

5.3 Testing

See inspection check list included in back of this manual.

Extra inspection check lists can be obtained from your nearest authorized distributor or directly from GRIPHOIST INC.

6. WARRANTY INFORMATION

- (1) GRIPHOIST INC. warrants its equipment be free from defects in material and workmanship under normal use and service.
- (2) Our obligation under this warranty is limited to repairing or replacing, at our option, any part of the unit, which upon examination to our satisfaction to be defective in material or workmanship, if the item in question is returned through GRIPHOIST Inc. distributor, transportation prepaid, within six (6) months from the date the equipment is sold to the original purchaser*. Return shipment must be prepaid.
- (3) Any parts proved to be defective upon inspection will be repaired or replaced at no cost for the parts themselves.
- (4) The obligation under this warranty does not include labor or travelling costs, consequential damages of any kind.
- (5) Any defect in this equipment must immediately be brought to attention of the distributor from whom the unit was purchased. The distributor will make arrangements with the factory for repairs or replacement of parts within the terms of the warranty.
- (6) GRIPHOIST Inc.'s obligation is limited to replacing parts and does not include replacing the complete unit. This warranty is void on any unit that has been modified or tampered with, repaired by person other than a factory representative or authorized GRIPHOIST Inc. distributor, repaired with other than GRIPHOIST Inc. standard parts, or damaged by reasons other than accident, alteration, misuse, or abuse.
- (7) This warranty is in lieu of all other warranties, expressed or implied. We do not authorize any person or representative to make other guarantee or to assume for any liability in connection with the sale of our appliances other than those contained herein. Any agreement outside of and contradictory to the foregoing shall be void and of no effect.

* "Original purchaser" definition:
for rental machines: Dealer,
for resale machines: First user.

GIVE TO SCAFFOLD ERECTOR & USER OR POST ON JOB

DEVELOPED FOR INDUSTRY BY SCAFFOLD INDUSTRY ASSOCIATION, INC.

CODE OF SAFE PRACTICES FOR SUSPENDED POWERED SCAFFOLDS

It is the responsibility of all employees and users to read and comply with the following common sense rules which are designed to insure safety in the erection and use of suspended powered scaffolds. These rules do not purport to be all inclusive nor to supersede other additional safety and precautionary measures to cover usual or unusual conditions. If these rules conflict in any way with any state, local or federal statute or regulation, said statute or regulation shall supersede these rules and it shall be the duty of each employee and user to comply therewith.

GENERAL RULES:

POST THESE SAFETY RULES at every job site in a conspicuous place and make certain that all persons who will erect, use, relocate, or dismantle suspended systems are fully aware of them and other governing codes.

READ, UNDERSTAND AND FOLLOW THESE RULES and manufacturers' instructions located in manuals supplied with and on plates posted on scaffolding equipment.

CONSULT YOUR SUSPENDED POWER SCAFFOLD EQUIPMENT SUPPLIER when in doubt.

OPERATE SAFELY – NEVER TAKE CHANCES.

INSTALLATION:

Use only suspended scaffolding system and personal safety equipment designed for the specific job operation.

Use equipment only in manner specified by equipment manufacturers.

Never use equipment that does not function properly. Clean and maintain equipment as specified by equipment manufacturer. Contact supplier for required service.

Never alter, remove or substitute components of a scaffold system.

Make sure that platforms have toeboards, rails and other enclosure items which meet governing requirements, and are properly installed and secured.

INSPECTION:

Inspect all suspension and operators' safety equipment, before installation, each day before use and after moving to new drop location, for damage and that it meets manufacturer's operational performance and safety standards.

Inspect wire rope each ascent and descent to insure that it has not been damaged.

ERECTOR:

Safe rigging installation is your responsibility.

Roof irons, hooks, parapet clamps, outrigger beams, or other rope supporting devices shall be capable of carrying the maximum applied loads with a safety factor of not less than 4:1. The strength of the building or structure to which such equipment is to be attached or on which it will rest, must be verified by a competent person prior to installation.

Tiebacks having strength equivalent to the hoisting ropes shall be installed without slack at right angles to the building and be firmly secured to a structurally sound portion of the structure. This structure shall have the capability of supporting the maximum suspended load with a safety factor of not less than 4:1. In the event that the tieback cannot be installed at right angles to the structure face, two tiebacks, without slack, shall be attached to each rope supporting device to prevent movement in any direction.

When outrigger beams are used for rope support, the inner end shall be restrained against vertical movement so that the beam is capable of supporting safely the maximum applied rope load with a safety factor of not less than 4:1. If counter-weights are used for beam restraint, they shall be of a non-flowable material, shall carry a weight value and be securely fastened to the beam.

5. When using traction type hoisting machines make sure that the wire rope is long enough to reach from the highest point of support to the lowest point of building structure plus rigging reeving lengths as defined in the hoisting machine manufacturer's instructions.
6. When using drum wrapping hoisting machines make sure that at least four wraps remain on the drum at the lowest point of descent, and the end of the rope is securely attached to the drum.
7. On two point suspension scaffolds make sure that the stirrups are directly under the suspension points.

WIRE ROPE:

1. Use only the wire rope and fittings specified by the hoisting machine manufacturer.
2. Use the number of wire rope clamps and tighten clamps in accordance with hoisting machine manufacturer's instructions. Before commencing work operations, preload wire rope with maximum work load, then retighten clamps to manufacturer's torque specifications. Check clamp tightening daily.
3. Inspect wire rope for damage daily. Do not use kinked, bird-caged, corroded, undersize, or damaged wire rope.
4. Clean and lubricate wire rope in accordance with manufacturer's instructions.
5. Handle wire rope with care – coil and uncoil properly. Do not drop coiled or uncoiled wire rope on ground from any height.
6. Do not expose wire rope to fire, undue heat, corrosive atmosphere or chemicals, to passage of electrical currents.
7. When welding on suspended scaffolds protect the wire rope from the welding torch or electrode. Make sure the platform is grounded and stray electrical currents cannot pass thru the suspension rope to ground thru the upper rope support or by contact of the rope with building structure or the ground.

SAFETY:

1. Always use safety belts attached by shortest effective lanyards and rope grabbing device to lifeline rigged to a separate building support point capable of carrying loads defined in governing regulations.
2. When working or riding on suspended scaffolds maintain the lanyard attachment to the lifeline at the highest point compatible with work movement.
3. The weight of men, work materials and components mounted on the scaffold must not exceed the manufacturer's rated loads.
4. Two or more scaffolds must not be combined into one by lapping platforms on one stirrup.
5. Do not overload the support rope.

Scaffold Industry Association, Inc. 1977

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