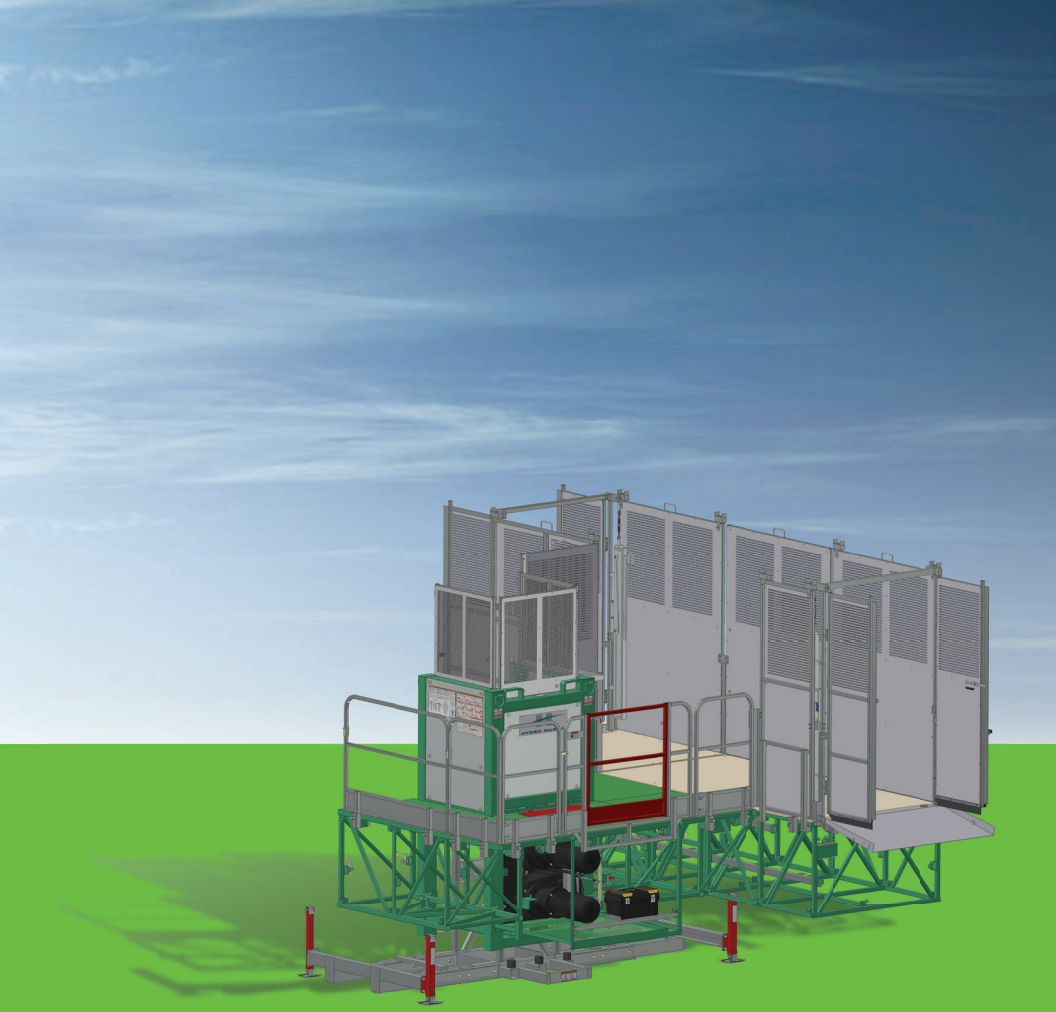

Owner's Manual

for the modular transport platform system

S SERIES

HYDRO MOBILE

ELEVATING EFFICIENCY

Call us for information:
1-888-484-9376 (US)
(toll free in the United States)
(450) 589-8100 (Canada)

50053020-0-00000-0
S-TPM_OpMan_v1.0_EN

This manual was produced by Hydro Mobile, a division of BrandSafway Access, Inc., on Adobe® InDesign CC® version 16.01 x64 for Windows®.
Technical drawings were prepared using Autodesk Inventor® 2020. Illustrations were created with Autodesk Inventor® 2020, Adobe® Illustrator CC® version 25.2.1 for Windows® and Adobe® Photoshop CC® version 22.3.0 for Windows®.

NOTE

All assembly and operation instructions located on the motorized unit and the transport platform guardrails take precedence over information contained in this manual. Should there be any discrepancies discovered throughout any published documentation issued by Hydro Mobile or its authorized affiliates, the following order of precedence shall prevail:

1. **Written documents issued by the Hydro Mobile Engineering department**
2. **Recall instructions**
3. **Assembly or operation instructions displayed on the motorized unit**
4. **Owner's manual**

Any use of a Hydro Mobile motorized unit or modular transport platform system, with or without accessories, in such a configuration or manner as not explicitly described in this manual is prohibited without the prior written permission of Hydro Mobile.

Revision List

Code / Version	Date	Description
50053020-0-00000-0 v1.0	May 2021	First edition of the manual

LEGEND OF ICONS

These icons are used to highlight important information throughout this manual

- **Danger** — Immediate hazard: if not avoided, will result in serious injury, even death
- **Warning** — Hazardous situation: if not avoided, could result in serious injury, even death and equipment damage
- **Caution** — Potentially hazardous situation: if not avoided, may result in minor or moderate injury and equipment damage
- **Notice** — Useful information to avoid equipment damage
- **Information** — Useful information for safe and easy operation
- **Useful tip** — A useful tip to facilitate installation or operation

HYDRO MOBILE

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1-888-484-9376 (US)
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Introduction

Dear owner or user:

Thank you for investing in a Hydro Mobile modular transport platform system for the S Series. The design of this transport platform system reflects over a decade of continued field operation, testing and research work and comes as a solution to our company's deepest concern, your safety and well being on the job.

To ensure that the workplace becomes safer and more efficient using a Hydro Mobile system, always have appropriately trained personnel assemble, operate, dismantle and move your transport platform system. These qualified persons will be required to read this owner's manual and assimilate the information contained herein. Failure to do so could lead to serious injury and/or equipment damage.

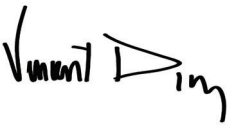
The transport platform was designed in accordance with the standard US ANSI A92.10-2009 (R2014). Furthermore, the transport platform system and its owner's manual comply with US Federal Occupational Safety and Health Administration Standards (OSHA), as well as with CSA B354.12-2017, B354.13-2017 and B354.14-2017.

To ensure safety, maximize the life expectancy of your equipment, and enjoy years of dependable and secure operation, this Hydro Mobile system must be inspected and serviced according to maintenance schedules and recommendations provided in this manual. It is also advised to refer to the motor user's manual included with the motorized unit.

Should you have any questions or concerns, please contact the nearest authorized service center or Hydro Mobile directly at 888-484-9376 (in the United States) or at 450 589-8100 (in Canada). You can also visit our website at www.hydro-mobile.com for additional support and information on our factory safety and performance training seminars.

We wish you years and years of safe, productive construction and renovation work.

Sincerely,



Vincent Dequoy
President

WARNING

To ensure that the workplace becomes safer and more efficient using a Hydro Mobile system, always have appropriately trained personnel assemble, operate, dismantle, transfer and maintain your transport platform system. These qualified persons will be required to read this owner's manual and assimilate the information contained herein. Failure to do so could lead to serious injury and/or equipment damage.

Hydro Mobile Warranty Policy

Warranty period

Hydro Mobile, a division of BrandSafway Access, Inc., herein referred to as Hydro Mobile, warrants its new S Series motorized units to be free from defect of materials and workmanship for a period of 15 months or a maximum of 650 operating hours whichever occurs first from the date of delivery to the authorized distributor/service center.

Hydro Mobile also warrants its new S Series parts and accessories to be free from defect of materials and workmanship for a period of 15 months from the date of delivery to the authorized distributor/service center.

Product registration

In accordance with standards governing mast climbing work platform systems, the owner of a Hydro Mobile S Series unit **must register the product with Hydro Mobile within sixty (60) days**. The initial buyer of a Hydro Mobile S Series unit is automatically registered by Hydro Mobile.

Hydro Mobile must be kept informed of any change of ownership. The new owner must provide Hydro Mobile with a full name and address, along with the model and serial number of the unit acquired.

Description of warranty

Parts and accessories manufactured by Hydro Mobile

Hydro Mobile's obligation and liability under this warranty are expressly limited to repairing or replacing with re-manufactured or new parts, at Hydro Mobile's option, any part and accessory manufactured by Hydro Mobile proven defective after inspection by Hydro Mobile which appear to have been defective in material or workmanship. Only permanent repairs will be covered under this warranty. Hydro Mobile reserves the right to ask for maintenance records of the defective part before settling a claim and to deny such claim if maintenance records are not available or not compliant with maintenance schedules.

This warranty shall not apply to component parts or accessories of products not manufactured by Hydro Mobile and which carry the warranty of the manufacturer thereof or to normal maintenance (such as engine tune-up) or any part necessary to perform such maintenance. Hydro Mobile offers no other warranty, expressed or implied, and offers no warranty of merchantability or fitness for any particular purpose.

Motor

All motors and gear boxes manufactured by Nord Gear Limited are covered by an international warranty of 15 months. To have a motor or a gear box repaired under this warranty, the motor or gear box must be brought to an authorized Hydro Mobile distributor/service center.

Battery

All the batteries shipped from the factory with new equipment are guaranteed for a period of 60 days. Any battery discharged due to operator error will not be covered under this warranty. Dead batteries that can be recharged will not be replaced under this warranty.

Costs and liability associated with warranty

Hydro Mobile's obligation under such warranty shall not include duty, taxes or any other charge whatsoever, or any liability for direct, indirect, incidental or consequential damage or delay.

Exclusion

Any use of one or several Hydro Mobile motorized units, with or without accessories, in such a configuration or manner as not explicitly described in the owner's manual is prohibited without the prior written permission of Hydro Mobile.

Any improper use, including operation after discovery of defective or worn parts, shall void this warranty. Improper use also includes operation beyond rated capacity, substitution of parts other than those approved by Hydro Mobile, including anchor systems, or any alteration, modification or repair by others in such manner as in Hydro Mobile's judgment affects the product materially and adversely.

Labor

All warranty work must be performed by a certified Hydro Mobile technician to be eligible for reimbursement under the warranty.

Performance and Safety Rules

SAFETY comes first. The installation and operation of a modular transport platform system is subject to hazards that can be avoided only by using extreme care and common sense, and by providing the **appropriate training and supervision** to all its users.

It is essential that the **installation** and **dismantling** of an S Series modular transport platform system be carried out according to the guidelines, instructions and warnings included in the owner's manual and performed by **qualified erectors/dismantlers** under the supervision of a **competent person** (see boxes below).

It is also imperative that the **operation** of an S Series modular transport platform system setup be carried out according to the guidelines, instructions and warnings included in the owner's manual. To ensure safe and proper operation, it is **mandatory** that the operation of a transport platform system be handled by a **qualified operator** (see box below).

NOTICE

The S Series modular transport platform configurations and the methods to achieve these configurations as shown and described in this owner's manual are the only ones authorized by Hydro Mobile. This owner's manual provides the instructions to achieve right-hand side configurations (right side of the unit). For instructions on how to achieve a left-hand side configuration, contact the Hydro Mobile technical team.

Definition of the competent person

Competent person means a person who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

Definition of the qualified person

"**Qualified**" means a person who, by possession of a recognized degree, certificate or professional standing, or who by extensive knowledge, training and experience, has successfully demonstrated the ability to solve or resolve problems relating to the subject matter, the work or the project.

Only a **qualified person** on the specific make and model of the Hydro Mobile equipment can carry out the following tasks:

User/operator

A **qualified user/operator** is allowed to operate Hydro Mobile units according to the guidelines, instructions, warnings and methods set out in the owner's manuals and Hydro Mobile training courses and after they have been erected, tested and passed for use by a qualified person.

Erector/dismantler

A **qualified erector/dismantler** is allowed to erect, dismantle, test, pass for use and modify the configuration of Hydro Mobile units according to the guidelines, instructions, warnings and methods set out in the owner's manuals and Hydro Mobile training courses.

Technician

A **qualified technician** is allowed to perform maintenance inspections and repairs on Hydro Mobile units according to the guidelines, instructions, warnings and methods set out in the owner's manuals and Hydro Mobile training courses.

Hydro Mobile recommends that Qualified Persons follow the Hydro Mobile University Training Program on the specific task and specific make and model to get proper qualifications. For more information on the Hydro Mobile University Training Program,

visit www.hydro-mobile.com/training

General guidelines

1- Make sure that a job survey - job hazard analysis has been performed. Refer to p. 112 of the *Transport, Storage and Maintenance* section for more information about the job survey – job hazard form.

2- Prepare a layout plan showing how the modular transport platform system (motorized unit and bridges) will be positioned near structures or walls to be erected. Make sure to position the motorized unit so as to provide proper anchoring points for the mast.

3- For each setup and configuration, a job/task-specific installation and dismantling procedure for any Hydro Mobile equipment used must be compiled in consultation with and approved by a qualified person before proceeding with the installation or dismantling of the equipment. The procedure must be part of the Safe Work Plan (SWP) and must be reviewed in pre-task planning/tool-box talks.

4- It is **mandatory** to refer to the *Mast Tie Schedule* table on p. 81 of the *Mast and Mast Ties* section and to the *Load Capacities* section on p. 88 **before the installation** of any S Series modular transport platform setup.

Performance and Safety Rules

5- Establish the distance between the mast climbing transport platform system and the structure or wall, taking into account curvatures, balconies, columns, trees, telephone wires, electrical lines, etc.

6- Refer to and follow local regulations governing distances between the transport platform system and electrical lines. As a reference, North American regulations generally recommend keeping a minimum safe approach distance (MSAD) of at least 10' (3 m) from overhead power lines carrying 50 000 volts or less.

7- Make sure the ground or support surface capacity meets with values included in the *Minimum Bearing Surface Capacities* on p. 16 for the *Transport Platform System* section. Soil compacting, cribbing or shoring can increase bearing capacity. The **jacks on the base** are designed to plumb the mast and **must not be used to support the load nor the motorized unit**. Contact a licensed engineer for assistance.

8- Never modify the transport platform system (including the motorized unit) or use substitute parts. This could adversely affect worker safety, unit performance and void the warranty. In addition, this could lead to serious injury or death.

9- Each S Series modular transport platform must be equipped with an appropriate fire extinguisher (not supplied). Use the bracket supplied with the motorized unit to hang the fire extinguisher in a readily accessible location (fig. 1.1, p. 10).

10- It is recommended not to smoke on the platform.

11- Workers exposed to potential hazards must always wear proper personal protection equipment (PPE) such as a helmet, safety boots, a fall arrest harness, etc., as prescribed by local regulations. In all cases where workers are exposed to fall hazards, fall protection is required. Installation of all the necessary guardrails is **mandatory**. Tie points (D-rings) located on the main trolley of the motorized unit (fig. 1.3, p. 10) are designed to resist to a maximum arrest force of 5000 lb (2268 kg) and can be used by workers to tie themselves to the unit (not more than one worker per D-ring).

12- The S Series modular transport platform system must not be used on a mast with a height over 500' (152 m). To maximize efficiency and because of the speed of travel, it is recommended to use the S Series modular transport platform system on a mast with a height of 200' (61 m) or less. The use of the optional cable trolley kit is recommended for an installation with a mast higher than 150' (45,7 m).

13- The S Series modular transport platform system must not be used with any equipment or any accessories not specifically manufactured and rated by Hydro Mobile to be used in an S Series modular transport platform application.

14- To ensure work efficiency, maintain an adequate equipment and parts inventory on the job site. Keep equipment in good condition.

15- Inspection and maintenance operations must be carried out efficiently and in a timely manner. Daily inspections and their related operations must be performed by a **qualified user/operator** every day or before every working shift. Frequent and annual inspections and their related operations must be carried out by a **qualified technician**. Refer to the *Transport, Storage and Maintenance* section on p. 109 for more information on inspection and maintenance requirements for S Series motorized units and their accessories.

16- The **qualified erectors/dismantlers** in charge of the installation must make sure that the equipment being installed has been duly inspected and meets all applicable safety standards.

17- Prior to installation, prepare an emergency evacuation plan that is specific to the job site and is in accordance with local regulations.

18- After installation, mark off limit areas of the system using fencing, barriers, warning tape and note emergency phone numbers (fire and police dept.) for quick reference.

19- No load must be applied on a guardrail or a gate. Material must be stored away from guardrails and platform gates. It is also forbidden for anyone to lean on a guardrail or a gate.

20- Contact the distributor/service center or Hydro Mobile for service, repair or technical advice. Refer to equipment type and serial number when calling.

21- Before the installation can be passed for use, it is **mandatory** to make sure that **building landing gates** are installed on each level that will be accessed by the transport platform and that they conform to local regulations.

Performance and Safety Rules

22- In the event of an abnormal occurrence or operation which could compromise safety (for example, malfunction of a motorized unit component, collision with an obstacle, etc.), immobilize the unit and inform the **competent person**.

23- **Do NOT** touch any of the moving parts on the transport platform system when it is in use.

24- All platform gates and access panels on the transport platform and the motorized unit must be closed when they are not in use. All platform gates and access panels must be free from any material or obstruction.

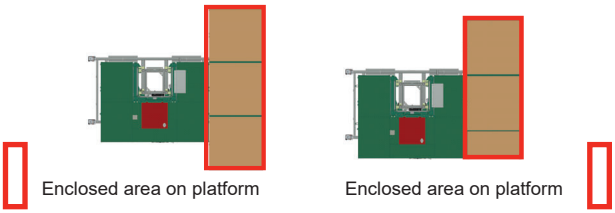
25- The motorized unit must not be used or operated during an electrical thunderstorm. The motorized unit and its components must not be used as ground for electrical connections. A motorized unit that is exposed to a thunderstorm must be submitted to a daily inspection by a qualified person before operation can be resumed. For the definition of a qualified person, refer to p. 7 of this section. If the transport platform enclosure is covered with a roof, make sure that the roof is clear of any accumulation of debris, snow or ice at all times. **No load is allowed on the roof** of the transport platform enclosure **at all times.**

26- When the transport platform is moving, it is **mandatory** for all workers to stand inside the enclosed area of the platform. Nothing must overhang or be protruding from the enclosed area **at all times** (material, body parts, etc.).

27- The placing of loads on the transport platform must be done with extreme care, under proper supervision. Never load the transport platform beyond its rated capacity. Overloading may bring damages to equipment or cause the installation to become unbalanced, leading to serious injury or death.

Refer to the *Load Capacities* section on p. 88 for more information about loads allowed on the transport platform. When the transport platform system is not in use, the motorized unit must be brought down to base level and all loads must be removed from the transport platform, including the motorized unit.

28- In the event of a power outage, it is recommended that all workers remain inside the enclosed area on the platform as a safety precaution until the power is restored. If the power has not been restored within a reasonable time, the emergency descent system must be used to bring the workers safely back to the nearest safe evacuation point. Refer to p. 40 of the *Safety Devices* section for more information on the use of the emergency descent system.



WARNING

The **erection** and **dismantling** of a transport platform (including the motorized unit, the base, the platform enclosure, the masts, the mast ties and all the other components) must not be conducted when wind speeds exceed **28 mph (45 km/h)**. A transport platform **must not be operated** when wind speeds exceed **35 mph (56 km/h)**.It is important to inspect every component of a transport platform installation that has been exposed to winds exceeding 102 mph (164 km/h).

When the transport platform is not in use:

- The motorized unit must be brought down to base level
- All loads must be removed from the transport platform, including the motorized unit

WARNING

It is **mandatory** to refer to the *Mast Tie Schedule* table on p. 81 of the *Mast and Mast Ties* section **before the installation** of **any** S Series modular transport platform setup.

CAUTION

It is essential to make sure that the decking on the bridges used in the transport platform configuration is adequate for a transport platform application (loading and unloading operations, point loading, etc.).

Modular Transport Platform System

Motorized unit – Overview

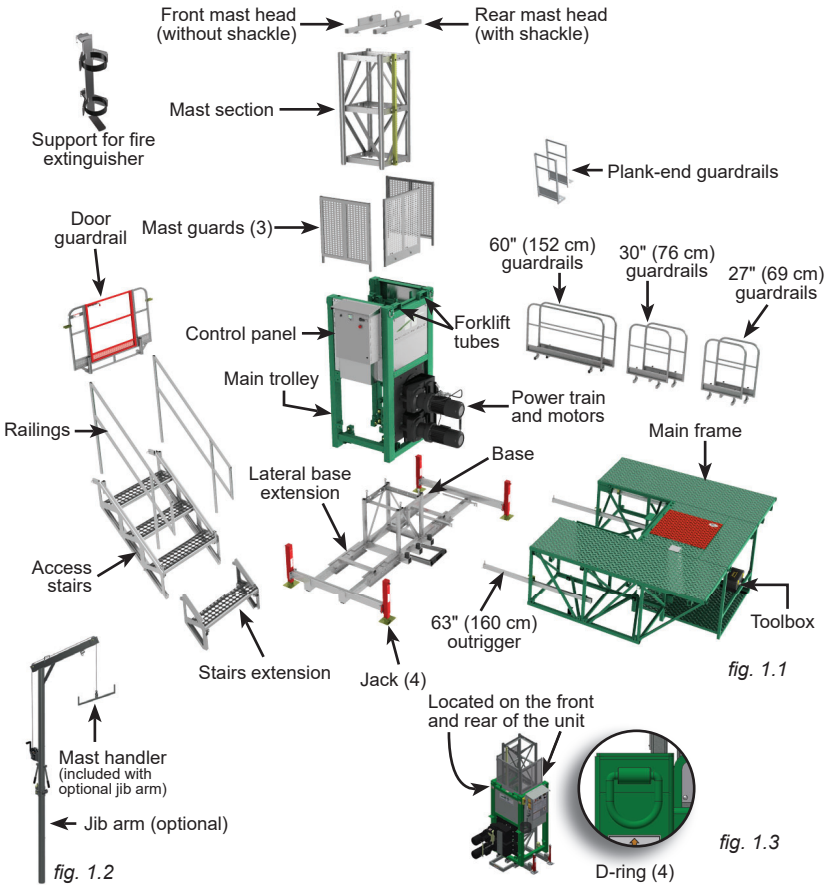


fig. 1.1

fig. 1.2

fig. 1.3

Note: Items depicted in illustrations throughout this manual may differ from actual products. Only one mast section (in addition to the half mast section welded on base) is included with the S Series motorized unit.

fig. 1.4

List of components included with shipped unit

Qty	Component	Qty	Component
1	S Series motorized unit	2	27" (69 cm) guardrails
1	base	12	guardrail "L" adapter brackets
2	base extensions (left and right)	1	access stairs
4	63" (160 cm) outriggers	2	access stairs ramps
1	mast section	1	access stairs extension
3	mast guard panels	1	door guardrail
2	60" (152 cm) guardrails	2	mast heads
2	30" (76 cm) guardrails	1	support for fire extinguisher

Note

The list of components included with each shipped motorized unit may change without notice.

fig. 1.5

Toolbox Components

Qty	Description
1	15/16" open end wrench
1	cable support kit
1	owner's manual
2	12.5 oz (370 ml) aerosol can of grease for rack and pinion

Modular Transport Platform System

Transport platform components – Overview

Bridge components

fig. 1.6
5' (1,5 m) bridge

fig. 1.7
Forward extension plates set

fig. 1.8
63" (160 cm) outrigger

fig. 1.10
Deck extension support pocket

fig. 1.9
Cross box

fig. 1.11
60" (152 cm) deck extension

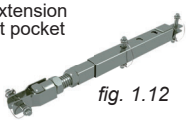


fig. 1.12
Short mast tie assembly

Transport platform components

fig. 1.13
60" x 84" (152 cm x 213 cm) guardrail

fig. 1.14
36" x 84" (91 cm x 213 cm) guardrail

fig. 1.15
Main gate assembly

fig. 1.16
28" x 84" (71 cm x 213 cm) guardrail

fig. 1.17
29" x 84" (74 cm x 213 cm) guardrail

fig. 1.18
Corner filler for platform gates

fig. 1.19
Straight filler for guardrails

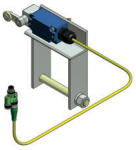


fig. 1.20
10' (3 m) safety stop switch kit

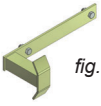


fig. 1.21
10' (3 m) safety stop trigger

Modular Transport Platform System

Motorized Unit Specifications

fig. 1.22

General Specifications		
Motorized unit dimensions (for transport)		99" x 147" x 102" (W x L x H) (251,5 cm x 373 cm x 259 cm)
Weight of motorized unit (as shipped)		7000 lb (3175 kg) (fully assembled)
Maximum height of mast		Up to 500' (152 m) of mast 200' (61 m) of mast recommended to maximize efficiency and because of the speed of travel
Freestanding		Not allowed
Distance between tie levels		Up to a maximum of 30' (9,1 m)
Maximum load capacity	5' x 15' (1,5 m x 5 m) configuration	3400 lb (1542 kg) + 1 operator
	5' x 12.5' (1,5 m x 3,8 m) configuration	3600 lb (1633 kg) + 1 operator
Drive system		Rack and pinion drive
Vertical travel speed	**240 VAC, 60 Hz**	30' (9,1 m) per minute
Mast section (1-rack)		28 9/16" x 30" x 60" (73 cm x 76 cm x 152 cm) 330 lb (150 kg) per section
Guardrails (included)		27" (69 cm) (2) 60" (152 cm) (2) 30" (76 cm) (2)
Safety devices	**Emergency descent**	Gravity-activated manual descent system
	Centrifugal brake	Centrifugal brake / maximum 34'/min (10,4 m/min)
	Safety stop	Safety stop switch at 10' (3 m) from base level (sold separately)

fig. 1.23

Operation Specifications	
Wind exposure	
	Maximum wind speed allowed
During operation	35 mph (56 km/h)
During erecting and dismantling	28 mph (45 km/h)
When unit is out of service	Transport platform must be brought down to base level
* The transport platform must only be used on a mast whose height does not exceed 500' (152 m)	
Ambient temperature	
Ambient temperature range for operation	-4°F to 104°F (-20°C to 40°C) Refer to Gear Box Specifications for appropriate oil types
Noise exposure	
Standard noise level	
(DB-A / 7 m) @ 3600 rpm	56 dBA

Detailed documentation for the motor can be obtained directly from Nord Gear Limited at **www.nord.com/docs** by supplying the model number and the serial number of the motor.

Modular Transport Platform System

Motorized Unit Specifications

Electrical Specifications	
Lifting power	18 HP
Power consumption (maximum load)	1 x 48A
Input power	240 VAC / 3 ph / 60 Hz (± 5%)
Control voltage	12 VDC
Starting current (peak)	Up to 290A
Power outlet for hand tool	1 x 220VAC/20A/60 Hz 1 x 120VAC/20A/60 Hz
Overall cable length up to 250' (76 m)	1 x 4/4 S00W
Overall cable length from 250' (76 m) up to 500' (152 m)	1 x 2/4 S00W

fig. 1.24

fig. 1.25

Gear Box Specifications (per gear box)		
Manufacturer		Nord Gear Limited
Model		SK7382
Oil 6.1 US gal (23 L)	Ambient temperature 32°F to 104°F (0°C to 40°C)	Shell Omala S2G 220
		Mobilgear 600 XP220
(for factory fill oil specifications refer to plate on gear boxes)	Ambient temperature -22°F to 140°F (-30°C to 60°C)	Shell Omala S4GX 220
		Mobilgear SHC 220
Maximum torque rate		55 630 lb-in (6285 N-m)
Output RPM		8,7 rpm

Motor Specifications (per motor)	
Manufacturer	Nord Gear Limited
Model	132S/4 CUS BRE100 RG
Rated power	7,5 HP (5,5 KW)
Service factor at full load	1,2
Rated amperage (nominal)	19,8A
Power supply – voltage, phase and frequency	240 VAC / 3 ph / 60 Hz
Rotation speed	1725 rpm
Braking torque	885 lb-in (100 N-m)
Power consumption of motor brake	85W
IP protection grade	IP65

fig. 1.26

Modular Transport Platform System

fig. 1.27

Weight of Components

UNIT and components

Description	Weight
S Series motorized unit (as shipped)	7000 lb (3175 kg)
Base with extensions and one full mast section	1475 lb (699 kg)
Mast guard (side)	30 lb (14 kg)
Mast guard (rear)	35 lb (16 kg)
Mast head (each)	32 lb (15 kg)
Multiple mast handler	18 lb (8 kg)

GUARDRAILS and OUTRIGGERS

Description	Weight
27" (69 cm) guardrail (without adapter brackets)	32 lb (15 kg)
30" (76 cm) guardrail (without adapter brackets)	32 lb (15 kg)
60" (1,5 m) guardrail (without adapter brackets)	50 lb (23 kg)
60" (1,5 m) door guardrail	100 lb (45 kg)
Guardrail adapter bracket	4 lb (2 kg)
Plank-end guardrail	25 lb (11 kg)
63" (1,6 m) outrigger	17 lb (8 kg)
72" (1,8 m) outrigger	27 lb (12 kg)
84" (2,1 m) outrigger	45 lb (20 kg)
120" (3,04 m) outrigger	55 lb (25 kg)

MAST and MAST TIES

Description	Weight
Mast assembly (1 rack)	330 lb (150 kg)
Mast assembly (2 racks)	365 lb (166 kg)
Mast tie frame	33 lb (15 kg)
Mast tie 36" (91 cm)	16 lb (7 kg)
Mast tie extension 36" (91 cm)	13 lb (6 kg)
Mast tie extension 60" (1,5 m)	20 lb (9 kg)
Rigid dual clamp	2.9 lb (1,3 kg)
Swivel dual clamp	3.1 lb (1,4 kg)
Wall tie bracket	2.2 lb (1 kg)

BRIDGE (including guardrail)

Description	Weight
5' (1,5 m) bridge assembly	390 lb (177 kg)

ACCESSORIES

Description	Weight
Access stairs assembly	83 lb (38 kg)
Access stairs handrail	21 lb (10 kg)
Access stairs extension	25 lb (11 kg)
Jib arm complete assembly	140 lb (63 kg)
Jib arm top assembly	108 lb (49 kg)
Jib arm bottom assembly	32 lb (14 kg)

TRANSPORT PLATFORM components

Description	Weight
28" x 84" (71 cm x 213 cm) guardrail	65 lb (29 kg)
29" x 84" (91 cm x 213 cm) guardrail	67 lb (30 kg)
36" x 84" (91 cm x 213 cm) guardrail	84 lb (38 kg)
60" x 84" (152 cm x 213 cm) guardrail	107 lb (49 kg)
Platform gate assembly	350 lb (159 kg)
Straight filler	8 lb (4 kg)
Corner filler	11 lb (5 kg)
Guardrail adapter bracket	1 lb (0,5 kg)
Forward extension plates assembly	2 lb (1 kg)
60" (1,5 m) deck extension (with outrigger)	124 lb (56 kg)
Short mast tie assembly	10 lb (5 kg)
Deck support pocket assembly	2 lb (1 kg)
Cross box assembly	4 lb (2 kg)

Dimensions of the Modular Transport Platform System

Top view

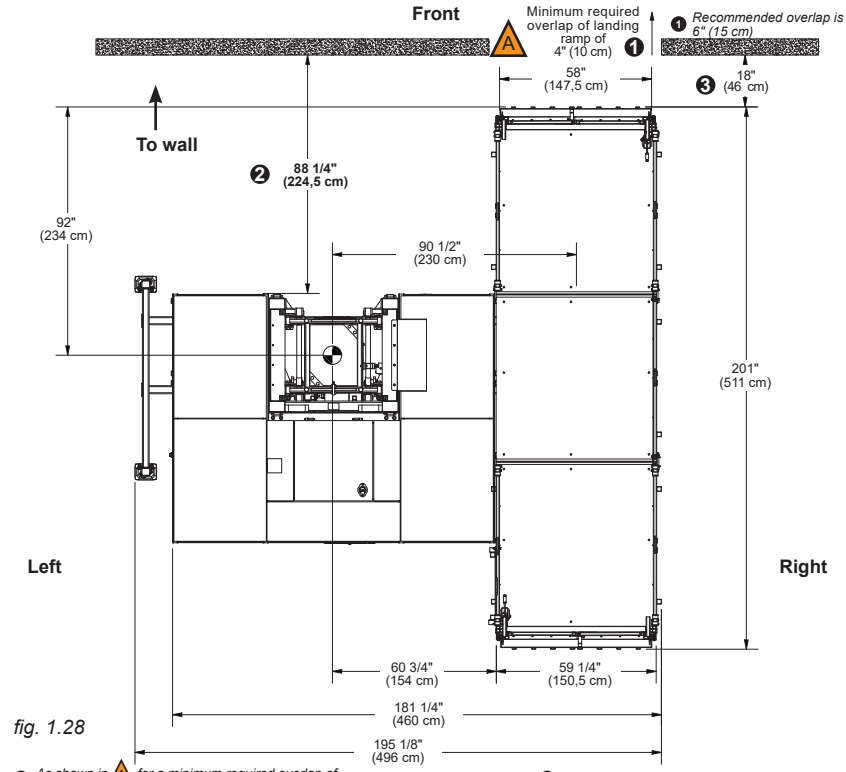
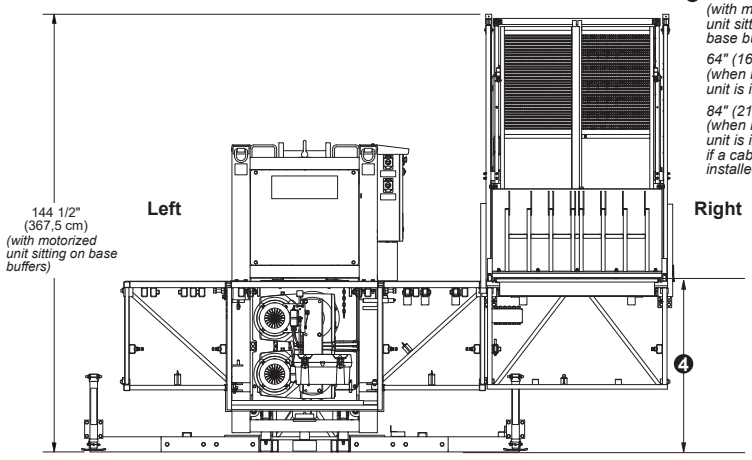


fig. 1.28

2 *As shown in A for a minimum required overlap of 4" (15 cm), maximum distance from wall must be 90 1/4" (229,5 cm); for a recommended overlap of 6" (15 cm), maximum distance from wall must be 88 1/4" (224,5 cm)*

3 *Minimum clearance distance between the wall and the closest component of the transport platform enclosure must be 18" (46 cm)*

Rear view



4 *56 3/8" (143 cm) (with motorized unit sitting on base buffers)*
64" (163 cm) (when motorized unit is in use)
84" (213,5 cm) (when motorized unit is in use and if a cable trolley is installed)

fig. 1.29

Modular Transport Platform System

Bearing surface

Before installing the motorized unit, make sure the bearing surface under it is level, clear of debris and has the proper bearing capacity. Appropriate cribbing must be placed under the base to distribute the load. It is important to make sure that the bearing surface is stable and has not been subject to any type of erosion or deterioration caused by weather conditions (snow, rain, etc.).

The type of cribbing chosen may vary according to the bearing surface where the setup must be installed.

For example, a setup installed on a concrete slab that is covering the bearing surface would require cribbing consisting of only one plywood panel under the base while a setup installed on a concrete slab that is covering an indoor garage would require shoring in addition to plywood cribbing.

A setup installed on a bearing surface composed of gravel, sand or any such type of surface would require stronger cribbing under the base.

In cases where shoring is required, it is recommended to contact an engineer for assistance.

Minimum Bearing Surface Capacities

Height		Reaction	
ft	m	lb	kg
25	7,6	17 100	7756
50	15,2	18 800	8528
100	30,5	22 100	10 024
150	45,7	25 400	11 521
200	61	28 700	13 018
250	76	32 000	14 515
300	91	35 300	16 012
350	107	38 600	17 509
400	122	41 900	19 006
450	137	45 200	20 502
500	152	48 500	21 999

Load reactions in table above include a dynamic factor

fig. 1.30

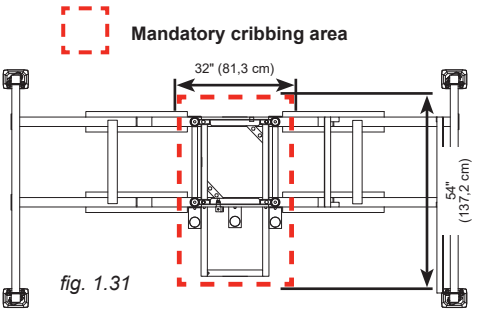


fig. 1.31

Two cribbing pads (see table in fig. 1.32) are required to cover the mandatory cribbing area

WARNING

Make sure the ground or support surface capacity meets with values included in the *Minimum Bearing Surface Capacities* table (fig. 1.30). Soil compacting, cribbing or shoring can increase bearing capacity. Any cribbing product or cribbing method approved by the site engineer can be used to distribute the load on the bearing surface providing it meets the values in the *Minimum Bearing Surface Capacities* table (fig. 1.30). Contact an engineer for assistance.

Recommended cribbing for most bearing surfaces

The plywood and lumber used as cribbing must be secured together to prevent slipping.

Recommended Cribbing Pad

		40" x 40" x 6" (102 cm x 102 cm x 15 cm)
1	Plywood 40" x 40" x 3/4" (102 cm x 102 cm x 2 cm)	2
2	Lumber 2"x 10" x 40" (5 cm x 25 cm x 102 cm)	12

fig. 1.32

Values shown in the above table are for reference only. Any cribbing that covers the mandatory cribbing area and can evenly distribute the reaction load on the bearing surface (as shown in fig. 1.31) can be used.

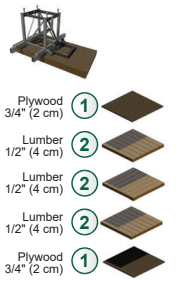


fig. 1.33

Modular Transport Platform System

General Guidelines

The installation of an S Series modular transport platform system must be achieved through the **complete pre-installation of tie levels** (see box below).
It is **mandatory** to refer to the *Mast Tie Schedule* table on p. 81 of the *Mast and Mast Ties* section **before the installation** of **any** S Series modular transport platform setup.
The configuration required by the layout plan will determine which method of installation is more appropriate.
The installation methods described in this owner's manual are for a **right-side setup**. For the installation of a **left-side setup**, contact the Hydro Mobile technical team.

Definition of the pre-installation of tie levels

The **pre-installation of tie levels**, referred to throughout this owner's manual and related documentation, consists in **installing all required tie levels up to the top of the installation before starting any work**, following the appropriate schedule of installation.

1- Installation must be carried out by **qualified erectors/dismantlers** under the supervision of a **competent person**, in accordance with all applicable local regulations. The use of fall protection is mandatory for erectors/dismantlers during the pre-installation of tie levels. For the definition of a competent person and a qualified erector/dismantler, refer to p. 7 of the *Performance and Safety* section. For information about fall protection, refer to p. 41 of the *Safety Devices* section.

2- In reference to the job survey/job hazard analysis, the layout plan, the selected configuration and the job/task-specific installation procedure, determine if there are obstacles or hazards, what are the cribbing and tie requirements, and make sure that all the components required are available. For more information about the configurations allowed for an S Series modular transport platform setup, refer to p. 18 of this section.

3- Establish the position of the transport platform system, taking into account that there must be a minimum clearance of 18" (46 cm) between the front edge of the transport platform setup where the platform gate will be installed and the face of the work, and that the landing ramp must overlap the landing level floor by a **recommended** 6" (15 cm) or the **minimum** overlap **required** of 4" (10 cm).

4- If the transport platform will be used to carry material through an opening in a building, make sure that the width of each opening is **at least** 58" (147,5 cm) wide and **not more than** 72" (183 cm), and that the support point for the overlap of the landing ramp has at least the same bearing capacity as the transport platform configuration used.

5- Building landing gates must be installed at no more than 4" (10 cm) from the front edge of the ramp, as shown in fig. 1.35.

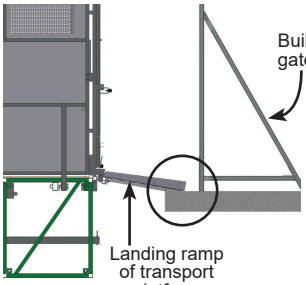


fig. 1.34

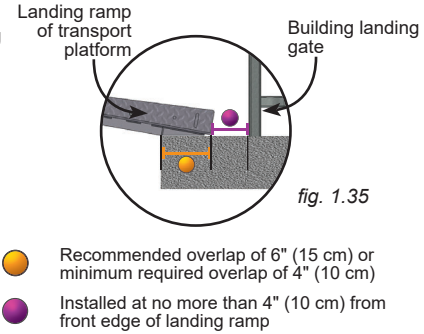


fig. 1.35

6- The use of an optional cable trolley kit is strongly recommended if the mast is higher than 150' (45,7 m). However, it must be noted that when the optional cable trolley is installed, the transport platform can no longer lower all the way down to the base buffers, as clearance is required under the unit for the cable trolley installation as shown in fig. 1.29, p. 15.

NOTICE

If an optional **cable trolley is used**, it must be noted that the transport platform **will no longer lower all the way down to the base buffers**, as clearance is required under the unit for the cable trolley installation, as shown in fig. 1.29, p. 15

Modular Transport Platform System

General Guidelines

7- Before installing the motorized unit, determine where the cribbing under the base and its back extension will rest. The bearing surface under the cribbing must be level, clear of debris and have the proper bearing capacity (see the *Minimum Bearing Surface Capacities* table, fig. 1.30, p. 16). Should the actual bearing capacity be inferior to the values in the table, seek instructions and recommendations from the site engineer. It is important to note that **the jacks on the base are designed to plumb the mast and must not be used to support the load nor the motorized unit**.

8- Lay down the cribbing and make sure it is level on both its front and side axis.

9- Unload the motorized unit with a rough terrain forklift or a crane. For more information on the lift and transport of an S Series motorized unit, refer to p. 106 of the *Transport, Storage and Maintenance* section. It is important to consider that an S Series motorized unit that must be lifted has a total weight of 7000 lb (3175 kg).

10- Proceed to the following instruction steps for the installation of the transport platform setup, as the configuration requires.

WARNING

Failure to follow the mast tie installation schedule could adversely affect worker safety, leading to serious injury or death and equipment damage. It is **mandatory** to refer to the *Mast Tie Schedule* table on p. 81 of the *Mast and Mast Ties* section before the installation of any S Series modular transport platform configuration. It is also **mandatory** to refer to the *Load Capacities* section on p. 88 for more information about the loads allowed in a configuration.

Setup and Configurations

The S Series modular transport platform system can be installed in two configurations. The installation procedure applies to a **right-hand** modular transport platform setup using an S Series motorized unit installed following either one of these two configurations. For installation instructions of the components included in these two configurations, refer to the *Transport Platform Components* section on p. 48. For instructions on how to achieve a left-hand side setup, contact the Hydro Mobile technical team.

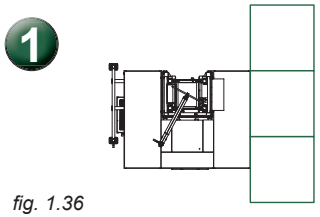


fig. 1.36

Configuration #1
5' x 15' (1,5 m x 4,5 m) transport platform

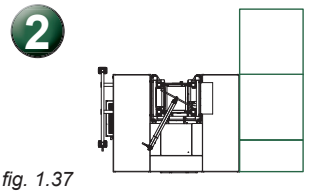


fig. 1.37

Configuration #2
5' x 12.5' (1,5 m x 3,8 m) transport platform

Installation Procedure for the Right Side of the Unit

Positioning the motorized unit

1- Prepare the motorized unit and the area where the transport platform will be installed as described in the general guidelines on p. 17 (steps 1 through 9).

Modular Transport Platform System

Installation Procedure for the Right Side of the Unit

Positioning the motorized unit

2- Lift and align the base of the motorized unit with the face of the work and lower it into position. To achieve a **recommended** 6" (15 cm) overlap of the landing ramp or the **minimum** overlap **required** of 4" (10 cm) and proper seating of the landing ramp (fig. 3.65 and fig. 3.67, p. 56), the minimum clearance distance between the closest component of the transport platform and the building must be 18" (46 cm). The distance between the face of the work and the front of the main frame must be at least 88 1/4" (224,5 cm) but not more than 90 1/4" (229,5 cm). For more information about distances, refer to fig. 1.28, p. 15.

3- Using the jacks on the lateral base extensions, plumb the mast on both its front and side axis, then, if required, use metal shims to make sure the base and its back extension sit squarely and level on the cribbing.

Connection of the unit and control panel to the power supply

4- Select a power cable appropriate for the installation. Refer to the *Power Cable Selection Chart* on p. 62 of the *Power Pack and Operating Components* section for help with the selection of the power cable. Make sure that the overall length of the cable is sufficient for the installation (height of mast, distance from power source, acceptable overall slack in cable).

5- Install and connect the power cable. **This installation must be performed by a certified electrician**. For instructions on the installation of the power cable, refer to p. 62 of the *Power Pack and Operating Components* section. It is important to note that if the optional cable trolley kit is required, it must only be installed once all the required tie levels have been installed to the top of the mast. For instructions on the installation and use of the optional cable trolley kit, refer to p. 99 of the *Accessories* section.

6- Power up the control panel and the motorized unit. Refer to p. 63 of the *Power Pack and Components* section for instructions on how to turn on the main power.

Installation of the first cantilever bridges

7- Using any appropriate lifting device such as a crane or a rough terrain forklift, **install only one 5' (1,5 m) bridge on each side of the mast**, as shown in fig. 1.40, p. 20. For instructions on how to install a bridge, refer to p. 50 of the *Transport Platform Components* section.

Verification of switches, sensors and screen alerts

8- Review panel alerts and perform a verification of the switches and sensors, and the safety stop.

On S Series motorized units bearing serial numbers S-0068 and up, it is **mandatory** to reset and adjust the bottom final limit switch. **Failure to perform this adjustment will lock the motorized unit and prevent operation**. For instructions on how to reset the bottom final limit switch, refer to p. 44 of the *Safety Devices* section.

9- Inspect the strobe under the main frame and make sure it is working appropriately.

10- If any of the switches or sensors is not working properly, the unit must be put out of service until it has been inspected and repaired by a qualified person. For more information about switches and sensors, and their corresponding alerts, refer to p. 67 of the *Control Panel* section. Refer to p. 7 of the *Performance and Safety Rules* section for the definition of a qualified person.

NOTICE

On S Series motorized units bearing serial numbers S-0068 and up, triggering the bottom final limit (BFL) or the top final limit (TFL) will cause a fault of the bottom (or top) final limit circuit: this will **lock** the **motorized unit** and **prevent operation**. In such a case, only a qualified erector/dismantler or a qualified technician can unlock the motorized unit.

Modular Transport Platform System

Installation Procedure for the Right Side of the Unit

Installation of the mast tie installation deck

11- Install the components for the mast tie installation deck. For instructions on the installation of the mast tie installation deck, refer to p. 95 of the *Accessories* section. Make sure the planks are removed from the area in front of the mast and that the outriggers clear all obstacles before raising or lowering the platform (fig. 1.41). The use of appropriate fall protection and proper tie points is **mandatory** for the qualified erectors/dismantlers during the pre-installation of tie levels. For more information about fall protection and tie points, refer to p. 41 of the *Safety Devices* section.

Installation of standard (low) guardrails for the pre-installation of tie levels

12- In all cases where workers are exposed to fall hazards greater than specified by local regulations, the installation of guardrails is **mandatory**.

During the pre-installation of tie levels, it is **mandatory** to use **standard (low) guardrails** to secure the motorized unit and the bridges (see all guardrails and locations in fig. 1.41). For instructions on the installation of standard (low) guardrails, refer to p. 98 of the *Accessories* section.

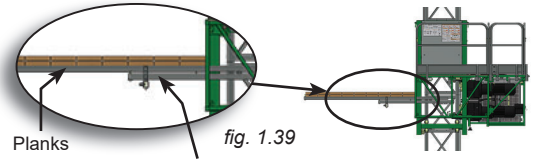


fig. 1.39

fig. 1.38

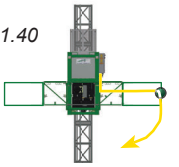


fig. 1.40

One 5' (1,5 m) bridge at **each** cantilever end
Secure the portion of cable coming from the control panel to the bridge on the same side

Low guardrails to be installed

- A — 27" (69 cm) guardrail
- B — 60" (152 cm) guardrail
- C — 30" (76 cm) guardrail
- D — Plank-end guardrails

Area (in red) where planks must be removed when raising or lowering unit

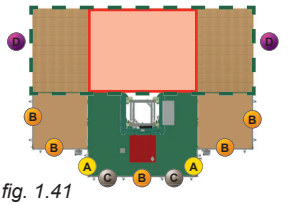


fig. 1.41

- D — Plank-end guardrails to secure end of planks
- Area (in green) that must be planked

CAUTION

Before raising or lowering the motorized unit during erecting operations, **make sure the planks are removed from the area in front of the mast and that the outriggers clear all obstacles**.

Guidelines for the installation of mast sections and tie levels

13- Mast sections and tie levels can now be installed following these guidelines:

- It is **mandatory** to refer to the *Mast Tie Schedule* on p. 81 of the *Mast and Mast Ties* section to determine where the tie levels will be installed. It is important to make sure that the distance between tie levels is appropriate. For more information about height difference between tie levels, refer to p. 78 of the *Mast and Mast Ties* section.
- It is **mandatory** to choose the appropriate method to install mast sections and tie levels and to comply with the instructions of the selected method of installation of mast sections and tie levels.
- It is **mandatory** throughout the installation of mast sections and tie levels to **monitor the load** on the motorized unit and the bridges. The **combined load** of the jib arm (if used), each mast section, all tie level components, each worker, each plank for the mast tie installation deck and any other item present on the transport platform **must be taken into account**.

Modular Transport Platform System

Installation Procedure for the Right Side of the Unit

Guidelines for the installation of mast sections and tie levels (cont'd)

- When reaching the height at which to install a tie level and after having installed the last mast section, it is **important** to make sure that **the load on the motorized unit and on the bridges never exceeds the maximum E&D load of 2000 lb (907 kg)** (workers, tools, mast sections, components for a tie level, jib arm, planks for the mast tie installation deck, and any other item present on the platform) to reduce mast deflection from plumbness and minimize stress on ties and mast assembly.

WARNING

It is important to make sure that the top limit sensor is working properly during the installation of mast sections and tie levels to prevent overtravel at the top of the mast. Overtravel can cause equipment damage, leading to serious injury or death.

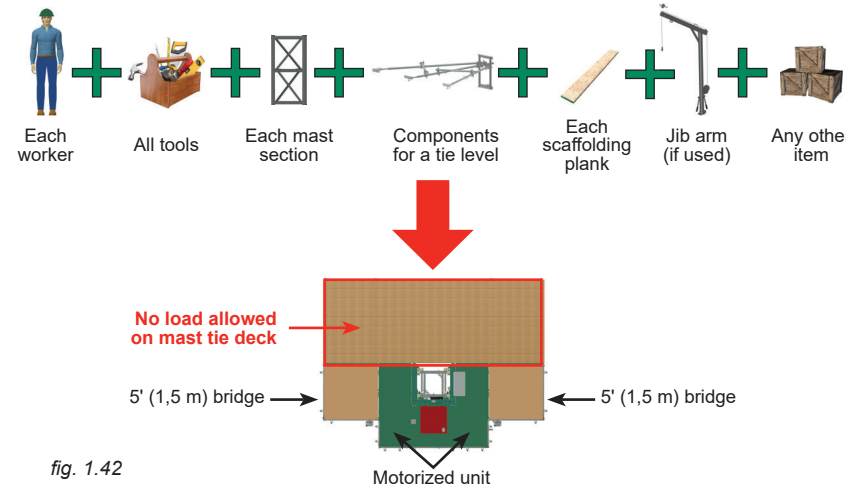


fig. 1.42

LOAD ON TRANSPORT PLATFORM DURING INSTALLATION

14- The mast sections and tie levels can be installed following two methods of installation:

- by loading mast sections and mast tie components on the bridges and the unit
- by using pre-assembled lengths of mast sections and loading mast tie levels components on the unit and bridges

For instructions on the installation of mast sections and tie levels **using the motorized unit and the bridges**, refer to p. 24 of this section. Refer to p. 26 for instructions on the installation of tie levels and **mast sections in pre-assembled lengths**.

Installation of mast sections and tie levels

15- Proceed with the installation of as many mast sections and tie levels as is required by the layout plan and the configuration. The S Series modular transport platform system must not be used on a mast with a height over 500' (152 m). To maximize efficiency and because of the speed of travel, it is recommended to use the S Series modular transport platform system on a mast with a height of 200' (61 m) or less. For more information about the schedule of installation of tie levels, refer to the *Mast Tie Schedule* table on p. 143 of the *Mast and Mast Ties* section.

WARNING

It is mandatory to **install all required tie levels** up to the top of the installation **before** starting any work, following the schedule of installation. Failure to install all tie levels as required by the mast tie schedule for an S Series modular transport platform application before starting any work could compromise the integrity of the installation, leading to serious injury or death.

Modular Transport Platform System

Installation Procedure for the Right Side of the Unit

Installation of the mast heads

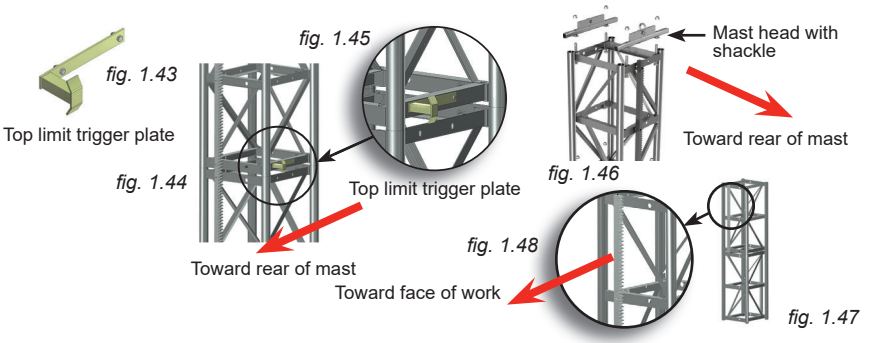
16- Once the installation of mast sections and tie levels is complete, install the two mast heads on top of the last mast section, making sure to install the mast head with the shackle at the **rear** position, as shown in fig. 1.46. Tighten all bolt assemblies with a torque of 150 lb-ft (203 N-m).

If mast heads are not used, make sure that the last mast section installed has **no rack** or only **one rack** that is **toward the face of the work** (fig. 1.47) to prevent overtravel.

Installing the top limit trigger plate and testing the top limit sensor

17- Install the top limit trigger plate (fig. 1.43) at the top of the work where traveling on the mast must end. Bolt the trigger plate on the bottom bar of the last mast section (fig. 1.45), on the same side as the control panel. Make sure that the trigger is facing toward the rear of the mast, as shown in fig. 1.44.

It is important to note that if a mast section is installed in step 16 as a means to prevent overtravel at the top of the mast, the trigger must be installed on the next to last mast section.



18- Test the operation of the top limit sensor. For instructions on how to verify the switches and sensors, refer to p. 44 of the *Safety Devices* section. Adjust the position of the sensor, if necessary. If the limit sensor is not working properly, the unit must be put out of service until it has been inspected and repaired by a qualified person. For the definition of a qualified person, refer to p. 7 of the *Performance and Safety Rules* section. For more information about switches and sensors, and their corresponding alerts, refer to p. 67 of the *Control Panel* section.

Installation of the cable trolley kit (optional)

19- If required install the optional cable trolley kit. For instructions on the installation and use of the cable trolley kit, refer to p. 99 of the *Accessories* section.

Installation of the movable buffer assembly (optional)

20- If required, install the movable buffer assembly. For instructions on the installation and use of the movable buffer assembly, refer to p. 102 of the *Accessories* section.

Greasing of the rack(s) and gears

21- Upon **initial setup and subsequently after every eight to ten hours of cumulative runtime** (unit travel up and down the mast), grease must be applied to the gears, and to the rack(s) from the top of the mast down. For more information, refer to the daily inspection checklist recommended for this motorized unit. If an **aerosol open gear lubricant** is used, **grease must be allowed to stand for 2-3 hours** before the motorized unit is used again. Use an open gear lubricant recommended by Hydro Mobile. Refer to p. 109 of the *Transport, Storage and Maintenance* section for more information on the appropriate lubrication method. Lower the motorized unit to base level, verifying the mast ties and the mast bolts and applying grease, as required, on the way down. Make sure that all bolt assemblies are tightened properly and are in good condition, and that grease is applied appropriately.

Installation of the mast guards

22- Once the racks and gears have been properly greased, install the mast guards. Tighten all bolt assemblies with a torque of 30 lb-ft (41 N-m).

Modular Transport Platform System

Installation Procedure for the Right Side of the Unit

Removal of pre-installation components

23- With the motorized unit at base level, remove the low guardrails and all the components of the mast tie installation deck (planks and doubled outriggers).

24- Remove the cantilever bridge installed on the side of the motorized unit **opposite** to where the transport platform components must be installed (fig. 1.49).

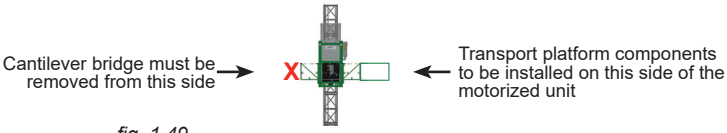


fig. 1.49

Installation of the transport platform bridges

25- Install all the bridges required by the configuration. Refer to p. 48 and p. 49 of the *Transport Platform Components* section for the number of bridges required by each configuration and instructions for their installation.

Installation of the transport platform (high) guardrails and gates

26- Install **all** the transport platform (high) guardrails and gates required for the configuration, as shown in fig. 3.1, p. 48 (configuration #1) or fig. 3.4, p. 49 (configuration #2) of the *Transport Platform Components* section. In all cases where workers are exposed to fall hazards greater than specified by local regulations, the installation of guardrails is **mandatory**. For instructions on the installation of the guardrails and the gates, refer to p. 59 of the *Transport Platform Components* section.

Connection of the gate detection switches

27- Connect the detection switches on both platform gate assemblies. For instructions on the connection of gate detection switches, refer to p. 43 of the *Safety Devices* section.

Installation of the safety stop

28- Install the safety stop switch and trigger. For instructions on the installation and use of the safety stop, refer to p. 41 of the *Safety Devices* section.

Verification of the setup

29- Make a final verification of the setup before passing the installation for use. Make sure all the guardrails, platform gates and landing level gates are in place and secure. In all cases where workers are exposed to fall hazards greater than specified by local regulations, the installation of guardrails is **mandatory**.

30- Before authorizing workers to use the motorized unit, perform every step in the daily inspection checklist. If required, fill out the handover sheet to complete the installation. Refer to p. 109 of the *Transport, Storage and Maintenance* section for more information about the daily inspection checklist and to p. 112 for information about the handover sheet.

CAUTION

It is essential to make sure that the decking on the bridges used in the transport platform configuration is adequate for a transport platform application (loading and unloading operations, point loading, etc.).

Modular Transport Platform System

Installation Procedure for the Right Side of the Unit

Installation of mast sections and tie levels loading the motorized unit and bridges

The installation of mast sections and tie levels must be performed by **qualified erectors/dismantlers**. For the definition of a qualified erector/dismantler, refer to p. 7 of the *Performance and Safety Rules* section.

The motorized unit and bridges can be used to carry the mast sections and mast tie components required to complete the installation of mast sections and tie levels to the top of the work. Only the **exact number of mast sections required to reach the height at which to install the next tie level** and the mast tie components required for that tie level must be loaded on the motorized unit and the bridges **at a time**. When reaching the height at which to install a tie level, it is also important to make sure that the **load on the motorized unit and on the bridges never exceeds the maximum E&D load of 2000 lb (907 kg)** (workers, tools, mast sections, components for a tie level, jib arm, planks for the mast tie installation deck, and any other item present on the platform).

As the mast sections are installed, the weight on the motorized unit and the bridges lessens, reducing mast deflection from plumbness and minimizing stress in ties and mast assembly.

1- Make sure mast guards and mast heads are removed.

2- Make sure the components required for the mast tie installation deck are installed.

3- With the motorized unit at base level, load only the exact number of mast sections required to reach the height at which to install a tie level, according to the *Mast Tie Schedule* on p. 81 of the *Mast and Mast Ties* section, and the mast tie components necessary for that tie level. Mast sections must be loaded with care and stored properly on the motorized unit and bridges to avoid damages to the racks. Load mast sections equally on the motorized unit and bridges, making sure that there are no more than three mast sections loaded on each side of the mast.

Evolution of the load on the motorized unit and bridges when installing a typical 30' (9,1 m) tie distance installation

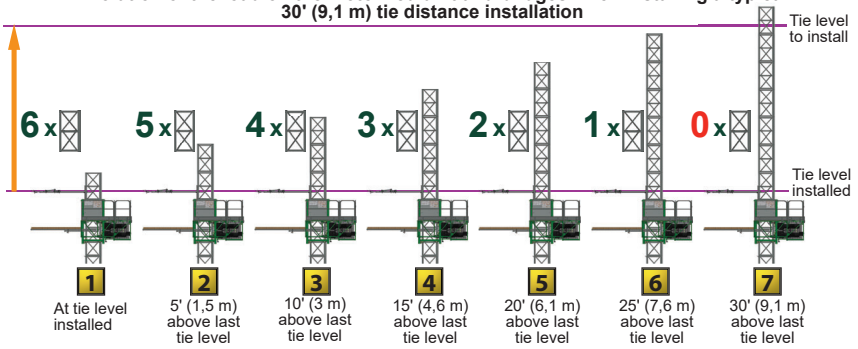


fig. 1.50

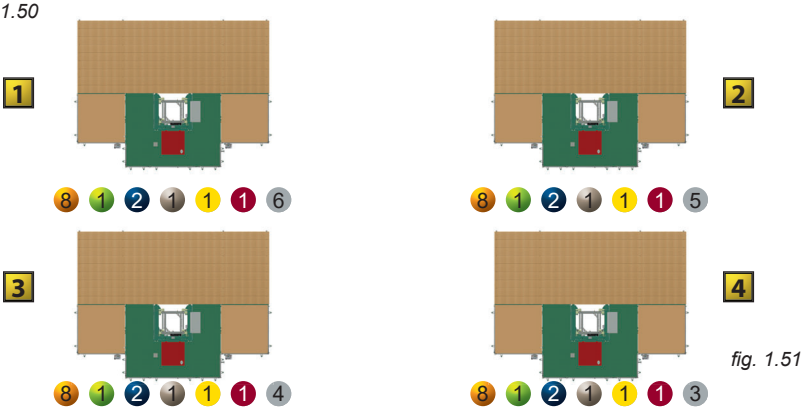


fig. 1.51

Notes: Refer to table in fig. 1.54, p. 25 for the weight of each item represented in the illustrations above
Numbers inside the bubbles indicate the quantity for the item in a particular step

Modular Transport Platform System

Installation Procedure for the Right Side of the Unit

Installation of mast sections and tie levels loading the motorized unit and bridges

Evolution of the load on the motorized unit and bridges when installing a typical 30' (9,1 m) tie distance installation

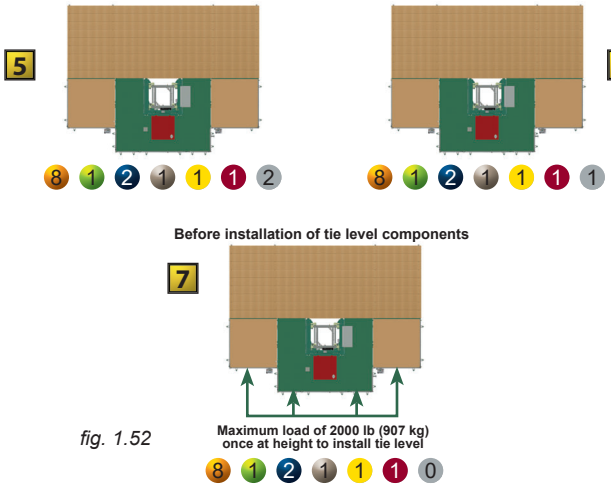


fig. 1.52

fig. 1.53

Notes: Refer to table in fig. 1.54 for the weight of each item represented in the illustrations above
Numbers inside the bubbles indicate the quantity for the item in a particular step

Total load per item for each step

Description	Weight per item	1	2	3	4	5	6	7
One-rack mast section	330 lb (150 kg)	1980 lb (898 kg)	1650 lb (748 kg)	1320 lb (599 kg)	990 lb (449 kg)	660 lb (299 kg)	330 lb (150 kg)	0
Components for one tie level	250 lb (113 kg)	250 lb (113 kg)	250 lb (113 kg)	250 lb (113 kg)	250 lb (113 kg)	250 lb (113 kg)	250 lb (113 kg)	250 lb (113 kg)
Scaffold wood plank	50 lb (23 kg)	400 lb (181 kg)	400 lb (181 kg)	400 lb (181 kg)	400 lb (181 kg)	400 lb (181 kg)	400 lb (181 kg)	400 lb (181 kg)
Jib arm	140 lb (64 kg)	140 lb (64 kg)	140 lb (64 kg)	140 lb (64 kg)	140 lb (64 kg)	140 lb (64 kg)	140 lb (64 kg)	140 lb (64 kg)
Worker	265 lb (120 kg)	530 lb (240 kg)	530 lb (240 kg)	530 lb (240 kg)	530 lb (240 kg)	530 lb (240 kg)	530 lb (240 kg)	530 lb (240 kg)
Installation tools	200 lb (91 kg)	200 lb (91 kg)	200 lb (91 kg)	200 lb (91 kg)	200 lb (91 kg)	200 lb (91 kg)	200 lb (91 kg)	200 lb (91 kg)
Total for installation of mast sections and tie level		**3500 lb (1588 kg)**	**3170 lb (1365 kg)**	**2840 lb (1216 kg)**	**2510 lb (1066 kg)**	**2180 lb (916 kg)**	**1850 lb (767 kg)**	**1520 lb (617 kg)**
Maximum weight allowed for other items		←	←	←	←	←	←	**480 lb (218 kg)**
TOTAL LOAD ON PLATFORM		**3980 lb (1805 kg)**	**3650 lb (1656 kg)**	**3320 lb (1506 kg)**	**2990 lb (1356 kg)**	**2660 lb (1207 kg)**	**2330 lb (1057 kg)**	**2000 lb (907 kg)**

fig. 1.54

4- Make sure that the planks have been removed from the area in front of the mast and make sure that the outriggers clear all obstacles (fig. 1.41, p. 20). Raise the motorized unit to where the next mast section must be installed.

5- Using an optional jib arm, lift and install mast sections until a tie level is required (steps 1, 2, 3, 4, 5, 6 and 7 in fig. 1.53). For instructions on the installation of mast sections, refer to p. 76 of the *Mast and Mast Ties* section. Refer to p. 91 of the *Accessories* section for instructions on the installation and use of the jib arm.

Modular Transport Platform System

Installation Procedure for the Right Side of the Unit

Installation of mast sections and tie levels loading the motorized unit and bridges

6- When reaching the height at which to install a tie level and once the mast section is in place, the **load on the motorized unit and the bridges must not exceed the maximum E&D load of 2000 lb (907 kg)** (workers, tools, mast sections, components for a tie level, jib arm, planks for the mast tie installation deck, and any other item present on the platform).

7- Install planks to cover the area in front of the mast (fig. 1.55) and install the tie level. Refer to p. 83 of the *Mast and Mast Ties* section for instructions on how to install mast ties.

8- Make sure to **remove the planking from the area in front of the mast** and make sure that the outriggers clear all obstacles. Bring the motorized unit back to base level. If required, load only the exact number of mast sections to reach the height at which to install the next tie level and the mast tie components required for that tie level on the motorized unit and the bridges.

NOTICE

When reaching the height at which to install a tie level and after having installed the mast section, it is important to make sure that the load on the motorized unit and on the bridges never exceeds 2000 lb (907 kg) (workers, tools, mast sections, components for a tie level, material, etc.) to reduce mast deflection from plumbness and minimize stress on ties and mast assemblies.

CAUTION

Before raising or lowering the motorized unit during pre-installation, **make sure that the planks on the mast tie installation deck are not in place** and that the outriggers clear all obstacles.

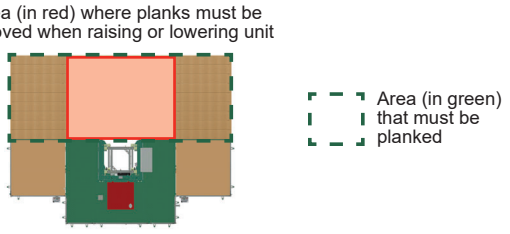


fig. 1.55

9- Repeat steps 4 through 8 to install as many mast sections and tie levels as is required by the layout plan and as is allowed. Any S Series modular transport platform must not be used on a mast with a height over 500' (152 m). To maximize efficiency and because of the speed of travel, it is recommended to use the S Series modular transport platform system on a mast with a height of 200' (61 m) or less.

10- Once all required mast sections and tie levels are in place, bring the motorized unit to base level, remove the mast tie deck components and remove the jib arm.

11- If additional mast sections and tie levels are required to be installed at a later time, it is mandatory to refer to the guidelines included on p. 28.

Installation of pre-assembled lengths of mast sections and tie levels

The installation of mast sections and tie levels must be performed by **qualified erectors/dismantlers**. For the definition of a qualified erector/dismantler, refer to p. 7 of the *Performance and Safety Rules* section.

The installation of mast sections can be achieved by using pre-assembled lengths of mast (also referred to as “sticks”). The use of the optional multiple mast handler is recommended to install these pre-assembled lengths of mast. For instructions on the installation and use of the multiple mast handler, refer to p. 104 of the *Accessories* section.

The maximum length of pre-assembled mast allowed is equal to the exact number of mast sections required to reach the height at which to install the next tie level, according to the *Mast Tie Schedule* on p. 81 of the *Mast and Mast Ties* section.

Modular Transport Platform System

Installation Procedure for the Right Side of the Unit

Installation of pre-assembled lengths of mast sections and tie levels

It is also important to make sure that the **load on the bridges and the motorized unit never exceeds the maximum E&D load of 2000 lb (907 kg)** (workers, tools, mast sections, planks for the mast tie installation deck, and any other item present on the platform) during the pre-installation of tie levels to reduce mast deflection from plumbness and minimize stress on ties and mast assembly.

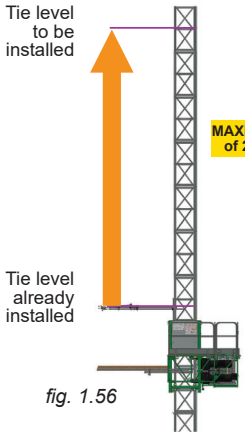
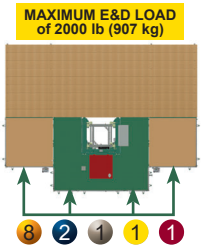


fig. 1.56

fig. 1.57



Description	Weight per item	Total load for item
One-rack mast section	330 lb (150 kg)	0
Components for one tie level	250 lb (113 kg)	250 lb (113 kg)
Scaffold wood plank	50 lb (23 kg)	400 lb (181 kg)
Jib arm	140 lb (64 kg)	0
Worker	265 lb (120 kg)	530 lb (240 kg)
Installation tools	200 lb (91 kg)	200 lb (91 kg)
Total for installation of mast sections and tie level		**1380 lb (626 kg)**
Maximum weight allowed for other items		**620 lb (281 kg)**
TOTAL LOAD ON PLATFORM		**2000 lb (907 kg)**

fig. 1.58

Note: Numbers inside the bubbles indicate the quantity for each item

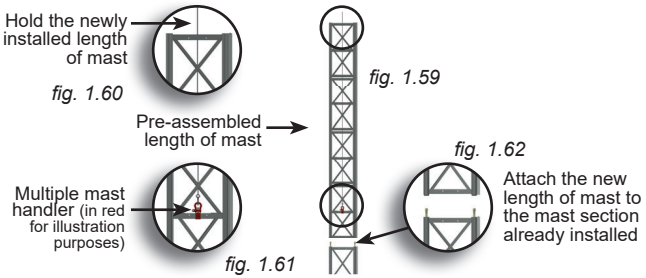
1- Make sure that the mast guards and the two mast heads are removed.

2- Make sure the components required for the mast tie installation deck are installed.

3- Make sure that the planks have been removed from the area in front of the mast and that the outriggers clear all obstacles before raising the platform (fig. 1.55, p. 26). Raise the motorized unit to where the next mast section must be installed.

4- Using a crane (or a forklift) and the optional multiple mast handler, carefully lift and lower the pre-assembled length of mast on top of the last mast section installed. Refer to p. 76 of the *Mast and Mast Ties* section for instructions on the assembly of mast sections. For instructions on the installation and use of the multiple mast handler, refer to p. 104 of the *Accessories* section.

5- Still holding the length of mast, attach the bottom mast section to the top of the mast section already installed. Tighten all bolts to 150 lb-ft (203 N-m).



Modular Transport Platform System

Installation Procedure for the Right Side of the Unit

Installation of pre-assembled lengths of mast sections and tie levels

6- Raise the motorized to the height where the tie level must be installed.

7- Install planks to cover the area in front of the mast and install the tie level. Refer to p. 83 of the *Mast and Mast Ties* section for instructions on how to install mast ties.

8- Make sure to **remove the planks from the area in front of the mast** and make sure that the outriggers clear all obstacles.

9- Repeat steps 3 through 8 to install as many mast sections and tie levels as is required by the layout plan and as is allowed. Any S Series modular transport platform must not be used on a mast with a height over 500' (152 m). To maximize efficiency and because of the speed of travel, it is recommended to use the S Series modular transport platform system on a mast with a height of 200' (61 m) or less.

10- If additional mast sections and tie levels are required to be installed at a later time, it is mandatory to refer to the guidelines included hereafter.

CAUTION

It is essential to make sure that the decking on the bridges used in the transport platform configuration is adequate for a transport platform application (loading and unloading operations, point loading, etc.).

Installation of Additional Mast Sections and Tie Levels While Setup Is In Use

The installation of additional mast sections and tie levels may be required for an S Series modular transport platform system being used on a structure that is being built progressively.

The installation of additional tie levels on a setup that is in a modular transport platform configuration is subject to constraints on the allowable distance between tie levels. It is **mandatory** to refer to the appropriate *Mast Tie Schedule*, on p. 81 of the *Mast and Mast Ties* section.

SAFETY comes first. It is essential that the **installation of additional mast sections and tie levels** of an S Series modular transport platform setup **already being used** be carried out by **qualified erectors/dismantlers** under the supervision of a **competent person** and be performed with the same care and precaution taken during the initial installation. The use of fall protection is **mandatory** for erectors/dismantlers during the installation of additional mast sections and tie levels.

It is mandatory to make sure that the transport platform installation remains stable and secure throughout the installation of additional mast sections and tie levels. For the definition of a qualified erector/dismantler, refer to p. 7 of the *Performance and Safety Rules* section.

Preparing the installation

1- Bring the motorized unit to base level. If required, remove the movable buffer assembly.

2- Make sure all loads have been removed from the transport platform.

Installation of the mast tie installation deck

3- Install the components for the mast tie installation deck. For instructions on the installation of the mast tie installation deck, refer to p. 95 of the *Accessories* section.

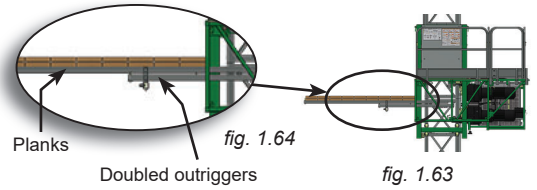


fig. 1.64 *fig. 1.63*

Planks must be removed when raising or lowering unit

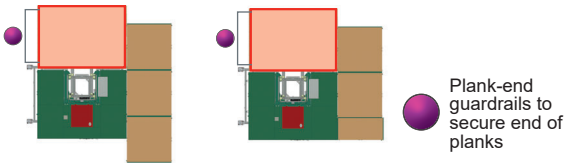


fig. 1.65

Modular Transport Platform System

Installation of Additional Mast Sections and Tie Levels While Setup Is In Use

Installation of the mast tie installation deck (cont'd)

4- Make sure the planks are removed from the area in front of the mast and that the outriggers clear all obstacles. The use of appropriate fall protection and proper tie points is **mandatory** for the qualified erectors during the pre-installation of tie levels. For more information about fall protection and tie points, refer to p. 41 of the *Safety Devices* section.

Guidelines for the installation of additional mast sections and tie levels

5- Additional mast sections and tie levels can now be installed following these guidelines:

- It is **mandatory** to refer to the appropriate *Mast Tie Schedule* on p. 81 of the *Mast and Mast Ties* section to determine where the tie levels will be installed. It is important to make sure that the distance between tie levels is appropriate. For more information about height difference between tie levels, refer to p. 78 of the *Mast and Mast Ties* section.
- It is **mandatory** to choose the appropriate method to install mast sections and tie levels and to comply with the instructions of the selected method of installation of mast sections and tie levels.
- It is **mandatory** throughout the installation of mast sections and tie levels to **monitor the load** on the motorized unit and the bridges. The **combined load** of the jib arm (if used), each mast section, all tie level components, each worker, each plank for the mast tie installation deck and any other item present on the transport platform **must be taken into account**.
- When reaching the height at which to install a tie level and after having installed the last mast section, it is **important** to make sure that **the load on the motorized unit and on the bridges never exceeds the maximum E&D load of 2000 lb (907 kg)** (workers, tools, mast sections, components for a tie level, jib arm, planks for the mast tie installation deck, and any other item present on the platform) to reduce mast deflection from plumbness and minimize stress on ties and mast assembly.

WARNING

It is important to make sure that the top final limit switch is working properly during the installation of mast sections and tie levels to prevent overtravel at the top of the mast. Overtravel can cause equipment damage, leading to serious injury or death.

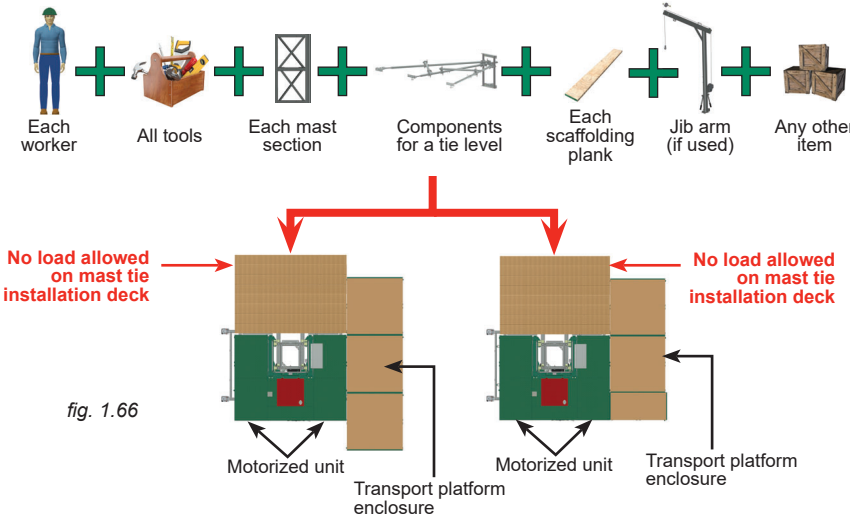


fig. 1.66

Modular Transport Platform System

Installation of Additional Mast Sections and Tie Levels While Setup Is In Use

Guidelines for the installation of additional mast sections and tie levels (cont'd)

6- The mast sections and tie levels can be installed following two methods of installation:

- by loading mast sections and mast tie components on the bridges and the unit
- by using pre-assembled lengths of mast sections and loading mast tie levels components on the unit and bridges

Mast sections must be loaded with care and stored properly on the motorized unit and bridges to avoid damages to the racks. Load mast sections equally on the motorized unit and bridges, making sure that there are no more than three mast sections loaded on each side of the mast.

For instructions on the installation of mast sections and tie levels **using the motorized unit and the bridges**, refer to p. 24 of this section. Refer to p. 26 for instructions on the installation of tie levels and **mast sections in pre-assembled lengths**.

Installation of mast sections and tie levels

7- Remove the two mast heads and the mast guards.

8- Proceed with the installation of as many mast sections and tie levels as is required by the layout plan and the configuration, and allowed by the mast tie schedule. The S Series modular transport platform system must not be used on a mast with a height over 500' (152 m).

Installation of additional components for the optional cable trolley

9- If required, install additional components for the optional cable trolley kit. For instructions on the installation and use of the cable trolley kit, refer to p. 99 of the *Accessories* section.

WARNING

It is mandatory to **install all required tie levels** up to the top of the installation **before** starting any work, following the schedule of installation. Failure to install all tie levels as required by the mast tie schedule for an S Series modular transport platform application before starting any work could compromise the integrity of the installation, leading to serious injury or death.

Installation of the last mast section and the mast heads

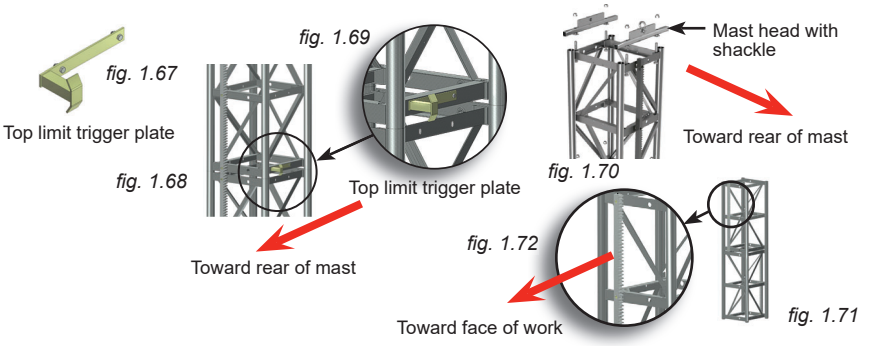
10- Once the installation of mast sections and tie levels is complete, install the two mast heads on top of the last mast section, making sure to install the mast head with the shackle at the **rear** position, as shown in fig. 1.70. Tighten all bolt assemblies with a torque of 150 lb-ft (203 N-m)

If mast heads are not used, make sure that the last mast section installed has **no rack** or only **one rack** that is **toward the face of the wor**k (fig. 1.71) to prevent overtravel.

Installing the top limit trigger plate and testing the top limit sensor

11- Install the top limit trigger plate (fig. 1.67) at the top of the work where traveling on the mast must end. Bolt the trigger plate on the bottom bar of the last mast section (fig. 1.68), on the same side as the control panel. Make sure that the trigger is facing toward the rear of the mast, as shown in fig. 1.68.

It is important to note that if a mast section is installed in step 10 as a means to prevent overtravel at the top of the mast, the trigger must be installed on the next to last mast section.



Modular Transport Platform System

Installation of Additional Mast Sections and Tie Levels While Setup Is In Use

Installing the top limit trigger plate and testing the top limit sensor (cont'd)

12- Test the operation of the top limit sensor. For instructions on how to verify the switches and sensors, refer to p. 44 of the *Safety Devices* section. Adjust the position of the sensor, if necessary. If the limit sensor is not working properly, the unit must be put out of service until it has been inspected and repaired by a qualified person. For the definition of a qualified person, refer to p. 7 of the *Performance and Safety Rules* section. For more information about switches and sensors, and their corresponding alerts, refer to p. 67 of the *Control Panel* section.

Greasing of the rack(s) and gears

13- Upon **initial setup and subsequently after every eight to ten hours of cumulative runtime** (unit travel up and down the mast), grease must be applied to the gears, and to the rack(s) from the top of the mast down. For more information, refer to the daily inspection checklist recommended for this motorized unit. If an **aerosol open gear lubricant** is used, **grease must be allowed to stand for 2-3 hours** before the motorized unit is used again. Use an open gear lubricant recommended by Hydro Mobile. Refer to p. 109 of the *Transport, Storage and Maintenance* section for more information on the appropriate lubrication method. Lower the motorized unit to base level, verifying the mast ties and the mast bolts and applying grease, as required, on the way down. Make sure that all bolt assemblies are tightened properly and are in good condition, and that grease is applied appropriately.

Installation of the mast guards

14- Once the racks and gears have been properly greased, install the mast guards. Tighten all bolt assemblies with a torque of 30 lb-ft (41 N-m).

Removal of mast tie deck components

15- Remove all the components of the mast tie installation deck (planks and doubled outriggers).

Verification of the setup

16- Make a final verification of the setup before passing the installation for use. Make sure all the guardrails, platform gates and landing level gates are in place and secure. In all cases where workers are exposed to fall hazards greater than specified by local regulations, the installation of guardrails is **mandatory**.

17- Before authorizing workers to use the motorized unit, perform every step in the daily inspection checklist. If required, fill out the handover sheet to complete the installation. Refer to p. 109 of the *Transport, Storage and Maintenance* section for more information about the daily inspection checklist and to p. 112 for information about the handover sheet.

CAUTION

It is essential to make sure that the decking on the bridges used in the transport platform configuration is adequate for a transport platform application (loading and unloading operations, point loading, etc.).

Dismantling a modular transport platform system – right side of the unit

SAFETY comes first. It is essential that the **dismantling** of an S Series modular transport platform setup be carried out by **qualified erectors/dismantlers** under the supervision of a **competent person** and be performed with the same care and precaution taken during the installation. The use of fall protection is mandatory for erectors/dismantlers during the dismantling of a setup.

This owner's manual for the S Series modular transport platform provides the method to dismantle a right-hand side configuration (right side of the unit). For instructions on how to dismantle a left-hand side configuration, contact the Hydro Mobile technical team.

It is mandatory to make sure that the transport platform installation remains stable and secure throughout the dismantling maneuvers. For the definition of a qualified erector/dismantler or a competent person, refer to p. 7 of the *Performance and Safety* section.

Safety guidelines for dismantling a modular transport platform installation

1- Make sure all loads have been removed from the transport platform.

2- Make sure all the equipment necessary for a safe dismantling of the installation is on hand (slings, crane or rough terrain forklift, etc., as required).

Modular Transport Platform System

Dismantling a Modular Transport Platform System – Right Side of the Unit

Preparing the installation for dismantling

1- Fill out the job survey – job hazard analysis form. For more information about the job survey – job hazard form, refer to p. 112 of the *Transport, Storage and Maintenance* section.

2- If required, remove the movable buffer assembly. For instructions on the removal of the movable buffer assembly, refer to p. 102 of the *Accessories* section.

3- If required, remove the optional cable trolley kit and its components. For instructions on the removal of the cable trolley kit, refer to p. 99 of the *Accessories* section.

4- Inspect all safety devices (emergency descent, safety stop, etc.) and make sure that they are working properly.

5- Perform every step in the daily inspection checklist. Refer to p. 109 of the *Transport, Storage and Maintenance* section for more information about the daily inspection checklist.

Removal of transport platform components

6- Remove all the transport platform (high) guardrails and gates. For instructions on how to store guardrails and gates, refer to p. 108 of the *Transport, Storage and Maintenance* section.

7- Remove all the bridges **except** the bridge bolted directly on the unit, as shown in fig. 1.73.

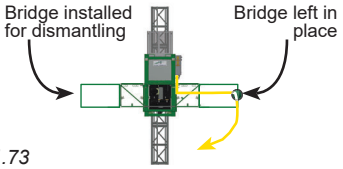


fig. 1.73

One 5' (1,5 m) bridge at **each** cantilever end
Secure the portion of cable coming from the control panel to the bridge on the same side

Installation of a cantilever bridge

8- Using any appropriate lifting device such as a crane or a rough terrain forklift, **install only one 5' (1,5 m) bridge on the opposite side of the mast**, so that there is one 5' (1,5 m) bridge installed at **each cantilever end** of the unit, as shown in fig. 1.73. For instructions on bridge installation, refer to p. 50 of the *Transport Platform Components* section.

Installation of standard (low) guardrails

9- In all cases where workers are exposed to fall hazards greater than specified by local regulations, the installation of guardrails is **mandatory**.

10- During the dismantling of tie levels, it is **mandatory** to use **standard (low) guardrails** to secure the motorized unit and the bridges (see all guardrails and locations in fig. 1.76, p. 33). For instructions on the installation of standard (low) guardrails, refer to p. 98 of the *Accessories* section.

Installation of the mast tie removal deck

11- Install the components for the mast tie removal deck. For instructions on the installation of the mast tie removal deck, refer to p. 95 of the *Accessories* section. Make sure the planks are removed from the area in front of the mast and that the outriggers clear all obstacles. The use of appropriate fall protection and proper tie points is **mandatory** for the qualified dismantlers during the dismantling of tie levels. For more information about fall protection and tie points, refer to p. 41 of the *Safety Devices* section.

Modular Transport Platform System

Dismantling a Modular Transport Platform System – Right Side of the Unit

Installation of the mast tie removal deck

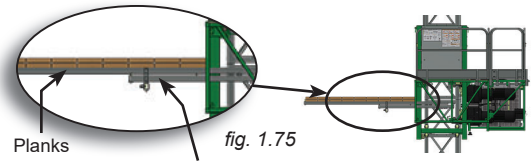


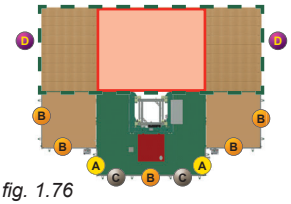
fig. 1.75

fig. 1.74

Low guardrails to be installed

- A — 27" (69 cm) guardrail
- B — 60" (152 cm) guardrail
- C — 30" (76 cm) guardrail
- D — Plank-end guardrails

Area (in red) where planks must be removed when raising or lowering unit



- D — Plank-end guardrails to secure end of planks
- Area (in green) that must be planked

fig. 1.76

Removal of the mast heads and the top limit trigger plate

12- Make sure that there are **no loads on the motorized unit and bridges**. Bring the motorized unit to the top of the work, verifying mast bolts and mast ties on the way up. Make sure that all mast bolts are tightened appropriately and that all mast ties are properly tied to the face of the work.

13- Remove the mast heads and the top limit trigger plate from the bottom bar of the last mast section.

Removal of tie levels and mast sections

14- The removal of all mast sections and tie levels must be performed with caution.

- It is **mandatory** to choose the appropriate method to remove tie levels and mast sections and to comply with the instructions of the selected method of removal of tiel levels and mast sections.
- It is **mandatory** throughout the removal of tie levels and mast sections to **monitor the load** on the motorized unit and on the bridges. The **combined load** of the jib arm (if used), each mast section, all tie levels components, each worker, each plank for the mast tie installation deck and any other item present on the transport platform **must be taken into account**.
- When at the height at which to remove a tie level, it is **important** to make sure that before removing that tie level and the mast section, the **load on the motorized unit and on the bridges does not exceed the maximum E&D load of 2000 lb (907 kg)** (workers, tools, mast sections, components for a tie level, jib arm, planks for the mast tie installation deck, and any other item present on the platform) to reduce mast deflection from plumbness and minimize stress on ties and mast assembly.

NOTICE

When reaching the height at which to remove a tie level, it is important to make sure that the load on the motorized unit and the bridges never exceeds 2000 lb (907 kg) (workers, tools, mast sections, components for a tie level, material, etc.) to reduce mast deflection from plumbness and minimize stress on ties and mast assemblies.

Modular Transport Platform System

Dismantling a Modular Transport Platform System – Right Side of the Unit

Removal of tie levels and mast sections (cont'd)

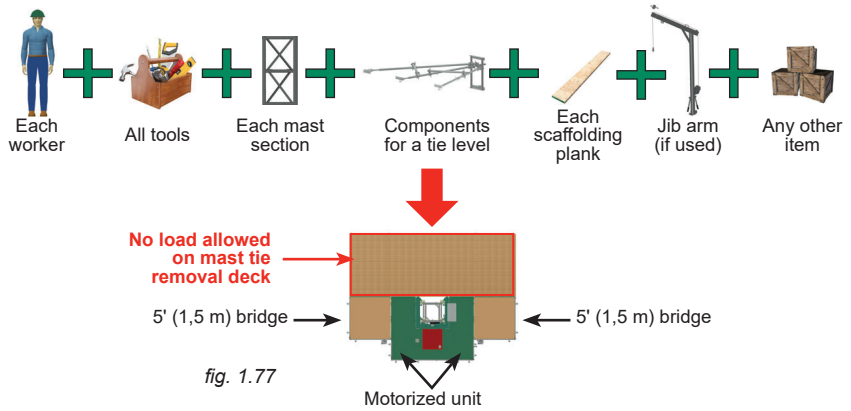


fig. 1.77

LOAD ON TRANSPORT PLATFORM DURING DISMANTLING

15- All mast sections and tie levels can be removed following two methods of removal

- by loading the removed mast tie components and mast sections on the motorized unit and on the bridges
- by loading the removed mast tie components on the motorized unit and on the bridges and removing the mast sections in assembled lengths (also referred to as “sticks”)

For instructions on the removal of mast sections and tie levels **using the motorized unit and the bridges**, refer to p. 35 of this section. Refer to p. 38 for instructions on the removal of tie levels and **mast sections in pre-assembled lengths**.

16- Remove all tie levels and mast sections, **leaving the last two tie levels in place**.

Removal of the last two tie levels and the last mast sections

17- When **only two tie levels are remaining**, it is important to **proceed with extreme care** to make sure that the stability of the motorized unit is not compromised during the operation.

18- Once it has been determined that motorized unit is stable, remove the last tie levels and mast sections. It is important to continue to monitor the load on the motorized unit and bridges to make sure that when at a tie level, the load **does not exceed the maximum E&D load of 2000 lb (907 kg)** (workers, tools, mast sections, components for a tie level, jib arm, planks for the mast tie installation deck, and any other item present on the platform).

19- Remove all mast sections, leaving only one full mast section on top of the half mast section welded on the base.

Completing the dismantling

20- Once the unit is at base level, remove all loads from the platform and make workers step down.

21- Turn off the main disconnect switch.

22- Remove the mast tie removal deck components (planks, outriggers, cross boxes) .

23- Remove all the standard (low) guardrails and the two 5' (1,5 m) cantilever bridges installed. For instructions on how to store guardrails and bridges, refer to p. 108 of the *Transport, Storage and Maintenance* section.

24- Disconnect the power cable from the motorized unit and the power source. **This operation must be performed by a certified electrician**. Store the power cable properly.

25- Refer to p. 108 of the *Transport, Storage and Maintenance* section for instructions on how to prepare an S Series motorized unit for transport and storage.

Modular Transport Platform System

Dismantling a Modular Transport Platform System – Right Side of the Unit

Removal of mast sections and tie levels loading the motorized unit and bridges

The removal of mast sections and tie levels must be performed by **qualified erectors/dismantlers**. For the definition of a qualified erector/dismantler, refer to p. 7 of the *Performance and Safety Rules* section.

The motorized unit and the bridges can be used to carry mast sections and tie level components when dismantling the installation.

Only the tie components of the tie level to be removed and the exact number of mast sections required to remove to reach the following tie level (lower) must be loaded on the motorized unit and bridges **at a time**. Consequently, when the motorized unit is at the height at which the tie level must be removed, it is important to make sure that the **load on the motorized unit and bridges never exceeds the maximum E&D load of 2000 lb (907 kg)** (workers, tools mast sections, components for a tie level, jib arm, planks for the mast tie removal deck, and any other item present on the platform).

As the mast sections are removed from the setup, the weight on the motorized unit and the bridges builds up, increasing mast deflection from plumbness and intensifying stress in ties and mast assembly.

Evolution of the load on the motorized unit and bridges when dismantling a typical 30' (9,1 m) tie distance installation

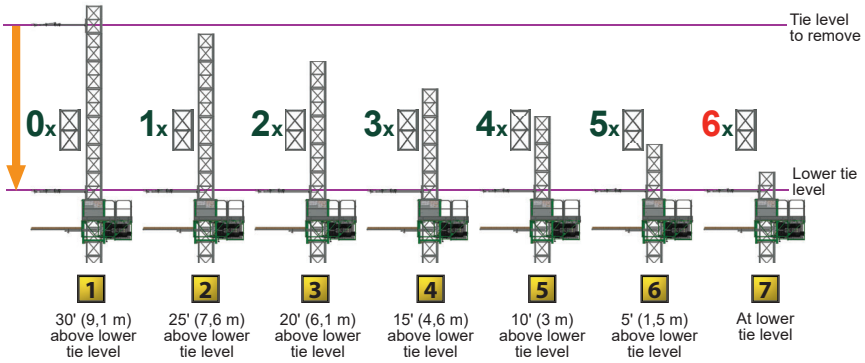


fig. 1.78

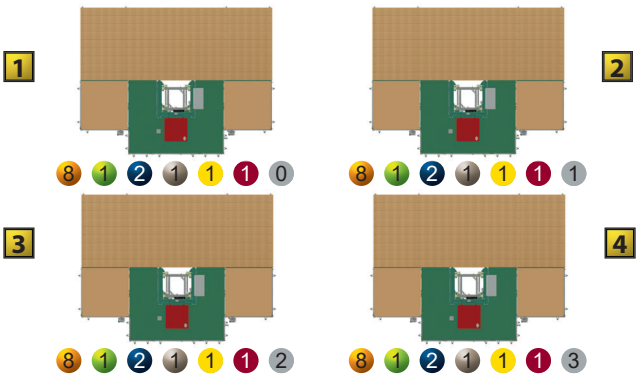


fig. 1.79

Notes: Refer to table in fig. 1.82, p. 36 for the weight of each item represented in the illustrations above
Numbers inside the bubbles indicate the quantity for the item in a particular step

Modular Transport Platform System

Dismantling a Modular Transport Platform System – Right Side of the Unit

Removal of mast sections and tie levels loading the motorized unit and bridges

Evolution of the load on the motorized unit and bridges when dismantling a typical 30' (9,1 m) tie distance installation

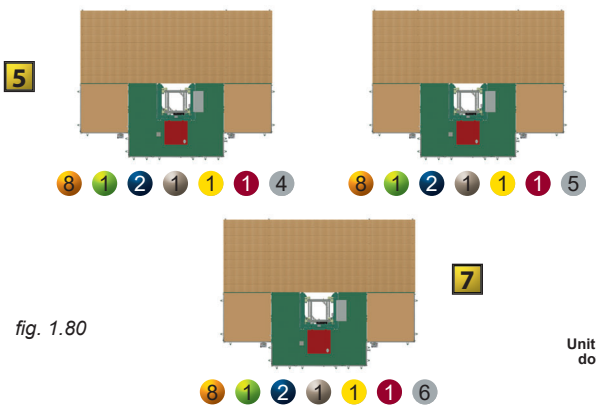


fig. 1.80

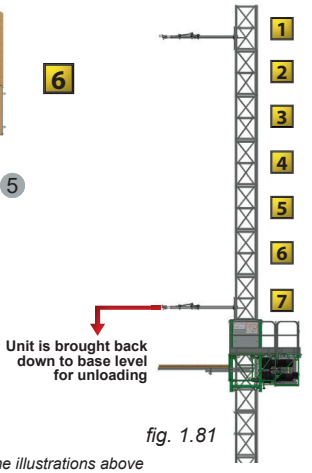


fig. 1.81

Notes: Refer to table in fig. 1.82 for the weight of each item represented in the illustrations above
Numbers inside the bubbles indicate the quantity for the item in a particular step

Total load per item for each step

Description	Weight per item	1	2	3	4	5	6	7
One-rack mast section	330 lb (150 kg)	0	330 lb (150 kg)	660 lb (299 kg	990 lb (449 kg)	1320 lb (599 kg)	1650 lb (748 kg)	1980 lb (898 kg)
Components for one tie level	250 lb (113 kg)	250 lb (113 kg)	250 lb (113 kg)	250 lb (113 kg)	250 lb (113 kg)	250 lb (113 kg)	250 lb (113 kg)	250 lb (113 kg)
Scaffold wood plank	50 lb (23 kg)	400 lb (181 kg)	400 lb (181 kg)	400 lb (181 kg)	400 lb (181 kg)	400 lb (181 kg)	400 lb (181 kg)	400 lb (181 kg)
Jib arm	140 lb (64 kg)	140 lb (64 kg)	140 lb (64 kg)	140 lb (64 kg)	140 lb (64 kg)	140 lb (64 kg)	140 lb (64 kg)	140 lb (64 kg)
Worker	265 lb (120 kg)	530 lb (240 kg)	530 lb (240 kg)	530 lb (240 kg)	530 lb (240 kg)	530 lb (240 kg)	530 lb (240 kg)	530 lb (240 kg)
Installation tools	200 lb (91 kg)	200 lb (91 kg)	200 lb (91 kg)	200 lb (91 kg)	200 lb (91 kg)	200 lb (91 kg)	200 lb (91 kg)	200 lb (91 kg)
Total for installation of mast sections and tie level		**1520 lb (689 kg)**	**1850 lb (839 kg)**	**2180 lb (989 kg)**	**2510 lb (1066 kg)**	**2840 lb (1288 kg)**	**3170 lb (1438 kg)**	**3500 lb (1588 kg)**
Maximum weight allowed for other items		**480 lb (218 kg)**	→	→	→	→	→	→
TOTAL LOAD ON PLATFORM		**2000 lb (907 kg)**	**2330 lb (1057 kg)**	**2660 lb (1207 kg)**	**2990 lb (1356 kg)**	**3320 lb (1506 kg)**	**3650 lb (1656 kg)**	**3980 lb (1805 kg)**

fig. 1.82

As the mast sections are removed, the weight on the motorized unit and the bridges builds up, increasing the possibility of mast deflection from plumbness and stress in ties and mast assemblies.

Modular Transport Platform System

Dismantling a Modular Transport Platform System – Right Side of the Unit

Removal of mast sections and tie levels loading the motorized unit and bridges

1- Prepare the installation as described in the safety guidelines and preparation instructions on p. 31 of this section.
2- Bring the motorized unit to where the tie level must be removed.
3- Install planks to cover the area in front of the mast (fig. 1.83).
4- Remove the tie level. For instructions on how to remove a tie level, refer to p. 85 of the *Mast and Mast Ties* section.

CAUTION

It is **mandatory** to make sure that **all tension (or compression) is released** from the mast tie before attempting to unpin it from the wall tie.

5- Using an optional jib arm, remove the mast section and load it carefully on the motorized unit or on a bridge. For instructions on how to remove mast sections, refer to p. 77 of the *Mast and Mast Ties* section. For more information about the installation and use of the jib arm, refer to p. 91 of the *Accessories* section.
Mast sections must be loaded with care and stored properly on the motorized unit and bridges to avoid damages to the racks. Load mast sections equally on the motorized unit and bridges, making sure that there are no more than three mast sections loaded on each side of the mast.
6- Make sure to **remove the planks from the area in front of the mast** (fig. 1.83). Make sure the outriggers clear all obstacles. Lower the motorized unit to where the next mast section must be removed.
7- Repeat step 5 to remove mast sections until the lower tie level is reached. Make sure to **leave that lower tie level in place**.

fig. 1.84

One 5' (1,5 m) bridge at **each** cantilever end

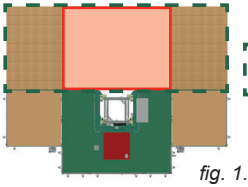


fig. 1.83

8- Bring the motorized unit back to base level for unloading. When the motorized unit is at the height at which a tie level must be removed, it is important to make sure that the **load on the motorized unit and the bridges never exceeds 2000 lb (907 kg)** (workers, tools, mast sections, components for a tie level, material, etc.) to minimize the risk of mast deflection from plumbness and reduce stress on ties and mast assemblies.
9- Repeat steps 2 through 8 to remove all mast sections and tie levels, **leaving the last two tie levels in place**. Make sure the cable coils properly and clears the base and moving components at all times.

NOTICE

When reaching the height at which to remove a tie level, it is important to make sure that the load on the motorized unit and bridges never exceeds 2000 lb (907 kg) (workers, tools, mast sections, components for a tie level, material, etc.) to reduce mast deflection from plumbness and minimize stress on ties and mast assemblies.

CAUTION

Before raising or lowering the motorized unit during dismantling, **make sure that the planks are removed from the area in front of the mast** and that the outriggers clear all obstacles.

Modular Transport Platform System

Dismantling a Modular Transport Platform System – Right Side of the Unit

Removal of tie levels and assembled mast sections

The removal of mast sections and tie levels must be performed by **qualified erectors/dismantlers**. For the definition of a qualified erector/dismantler, refer to p. 7 of the *Performance and Safety Rules* section.

Mast sections can be removed in assembled lengths of mast (also referred to as "sticks"). The use of the optional multiple mast handler is recommended to remove these assembled lengths of mast.

The maximum length of assembled mast allowed is equal to the exact number of mast sections to reach the next lower tie level.

It is also important to make sure that the **load on the motorized unit and bridges never exceeds 2000 lb (907 kg)** (workers, tools, mast sections, components for a tie level, material, etc.) during dismantling to minimize the risk of mast deflection from plumbness and reduce stress on ties and mast assemblies.

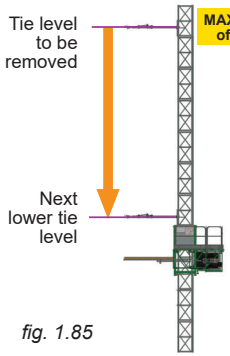


fig. 1.85

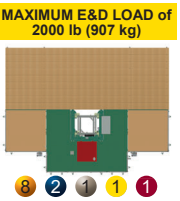


fig. 1.86

Description	Weight per item	Total load for item
One-rack mast section	330 lb (150 kg)	0
Components for one tie level	250 lb (113 kg)	250 lb (113 kg)
Scaffold wood plank	50 lb (23 kg)	400 lb (181 kg)
Jib arm	140 lb (64 kg)	0
Worker	265 lb (120 kg)	530 lb (240 kg)
Installation tools	200 lb (91 kg)	200 lb (91 kg)
Total for installation of mast sections and tie level		**1380 lb (626 kg)**
Maximum weight allowed for other items		620 lb (281 kg)
TOTAL LOAD ON PLATFORM		**2000 lb (907 kg)**

fig. 1.87

Note: Numbers inside the bubbles indicate the quantity for each item

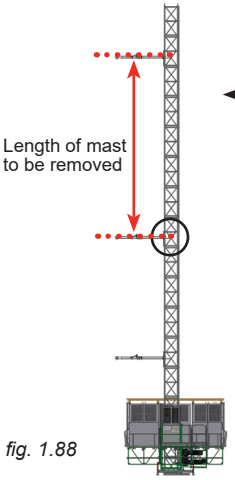


fig. 1.88

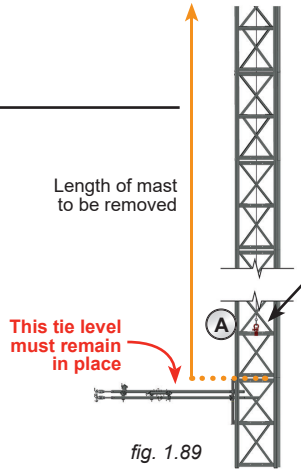


fig. 1.89

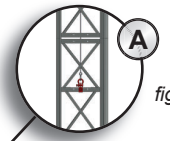


fig. 1.90

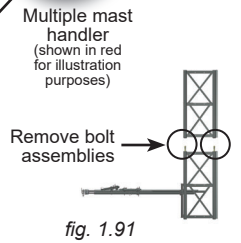


fig. 1.91

Modular Transport Platform System

Dismantling a Modular Transport Platform System – Right Side of the Unit

Removal of tie levels and assembled mast sections

1- Prepare the installation as described in the safety guidelines and preparation instructions on p. 31 of this section.

2- Bring the motorized unit to where the tie level must be removed.

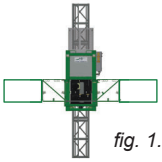
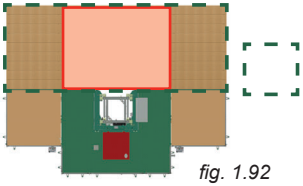


fig. 1.93

One 5' (1,5 m) bridge at **each** cantilever end

Area (in red) where planks must be removed when raising or lowering unit



Area (in green) that must be planked

fig. 1.92

3- Install planks to cover the area in front of the mast (fig. 1.92).

4- Remove the tie level. For instructions on how to remove a tie level, refer to p. 85 of the *Mast and Mast Ties* section.

5- Make sure to **remove the planks from the area in front of the mast** (fig. 1.92). Make sure that the outriggers clear all obstacles. Lower the motorized unit to the next lower tie level (as shown in fig. 1.85, p. 38).

CAUTION

It is **mandatory** to make sure that **all tension (or compression) is released** from the mast tie before attempting to unpin it from the wall tie.

6- Install the optional multiple mast handler on the middle step of the lowest mast section of the length of mast to be removed (shown as “A” in fig. 1.89 and fig. 1.90, p. 38). For instructions on the installation and use of the optional multiple mast handler, refer to p. 104 of the *Accessories* section.

7- Using a crane (or a forklift), hold the assembled length of mast to be removed.

8- Remove the bolt assemblies joining the lowest mast section of the assembled length to the mast section below (see fig. 1.91, p. 38). Refer to p. 77 of the *Mast and Mast Ties* section for instructions on the removal of mast sections. **Make sure to leave the lower tie level in place.**

9- Make sure the load on the motorized unit and the bridges does not exceed **the maximum E&D load of 2000 lb (907 kg)**. If required, lower the motorized unit to base level to unload.

10- Once the bolt assemblies are removed, carefully lift the length of mast and lower it down in a safe area, away from construction traffic. For instructions on the handling of an assembled length of mast sections, refer to p. 104 of the *Accessories* section.

11- Repeat steps 6 through 10 to remove all mast sections and tie levels, **leaving the last two tie levels in place**.

CAUTION

Before raising or lowering the motorized unit during dismantling, **make sure that the planks are removed from the area in front of the mast** and that the outriggers clear all obstacles.

Safety Devices

Emergency Descent Control System

In the event of a power outage, use the gravity-activated emergency descent control system to bring the motorized unit safely down to the **nearest safe evacuation point**. It is important to note that the emergency descent system **must not be used** in the event of damages to a gear box, a brake, a gear or an idler.

Emergency descent procedure

1- Turn off the main disconnect switch to shut down the power (fig. 5.1, p. 64). It may be required by local regulations for the operator to be tied to the unit using one of the D-rings on the main frame during the emergency descent (shown in fig. 2.8 and fig. 2.9, p. 41).

2- Perform a visual inspection of gears, pinions and rollers and other parts of the structure to make sure that they are clear of debris and that there are no signs of damages that could prevent the emergency descent system from operating normally. The emergency descent system **must not be used if the motorized unit is damaged or suspected to be damaged**. In case of doubt, contact a qualified technician to seek advice. For the definition of a qualified technician, refer to p. 7 of the *Performance and Safety Rules* section.

3- Perform a visual inspection of the structure. In case of **doubt** regarding the structural integrity of the installation, the **emergency descent must not be initiated** and the installation must be **evacuated** following the emergency evacuation plan (see step 17 of the general guidelines starting on p. 7 of the *Performance and Safety Rules* section).

4- Open the access panel on the main frame (fig. 2.1). Remove the toggle pin to unlock the emergency descent pedal. Step on and hold the emergency descent pedal fully depressed (fig. 2.2) to initiate the emergency descent. The platform will descend at a pre-determined speed.

5- Lower the installation on a distance of 30' (9,1 m) then release the pedal and **let the centrifugal brakes cool down for 5 minutes** before resuming descent. Proceed in that fashion down to the **nearest safe evacuation point**.

6- It is important to note that the bottom limit sensor, audible alarm and 10-foot safety stop do not work during a manual descent of the platform. Make sure that all workers on and off the platform have been warned and that the areas below and around the descending setup have been cleared and remain free of obstacles and workers. It is recommended to monitor carefully the lowering of the platform during the emergency descent.

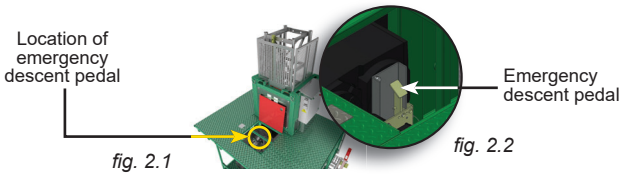


fig. 2.1 *fig. 2.2*

Centrifugal Brakes

The Hydro Mobile S Series is equipped with centrifugal brakes. This safety feature is designed to bring the motorized unit and the installation safely down to the nearest safe evacuation point at a factory-set speed. It is important to make sure that the brakes are **allowed to cool down for 5 minutes after every 30' (9,1 m) of descent**.

WARNING

It is important to make sure that the brakes are allowed to cool down for 5 minutes every 30' (9,1 m) of descent. Failure to allow the brakes to cool down could lead to damages to the equipment, causing serious injury or death.

Safety Devices

Fall Protection

The use of fall protection equipment is **mandatory** for all workers on an S Series modular transport platform setup whenever a fall hazard is present. It is recommended to use a combination of full body harness and a shock-absorbing lanyard. It is mandatory to use certified fall protection equipment that is clean and in good working condition. Fall protection equipment must be inspected before each use and be replaced if found or suspected to be defective.

Refer to the manufacturer's recommendations for more information about the use and care of the selected equipment. Refer also to local regulations for more information about fall protection equipment requirements.

The use of fall protection equipment is **mandatory** when installing and removing tie levels. Using the designated tie points (D-rings) on the main trolley of the motorized unit (fig. 2.8 and fig. 2.9), secure the fall protection equipment. Tie points are designed to resist to a maximum arrest force of 5000 lb (2268 kg) and can be used by workers to tie themselves to the unit (not more than one worker per tie point).

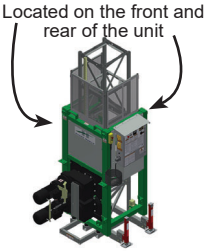
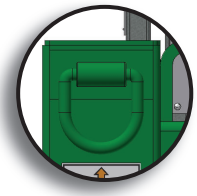


fig. 2.8



D-ring (4)

fig. 2.9

Safety Stop
(sold separately)

Safety standards require that transport platform systems be equipped with a detection system that prevents the platform from lowering any further when it is at 10' (3 m) above the bearing surface. This interruption allows the operator to make sure that there are no obstacles underneath the platform and that there is the necessary clearance to bring it down safely to base level. After three seconds, the stop switch will automatically trigger itself off, allowing to resume downward travel.

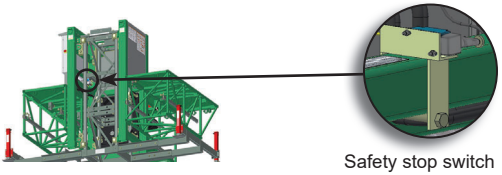


fig. 2.3

Safety stop switch

fig. 2.4

Installation of the safety stop switch

1- The installation of the safety stop switch must be performed by a **qualified erector/dismantler** or a **qualified technician**. For the definition of a qualified erector/dismantler or qualified technician, refer to p. 7 of the *Performance and Safety Rules* section. Locate the middle horizontal structural member that is closest to the control panel on the main trolley (fig. 2.5).

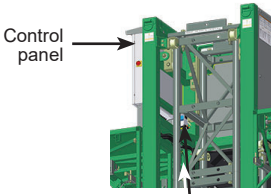


fig. 2.5

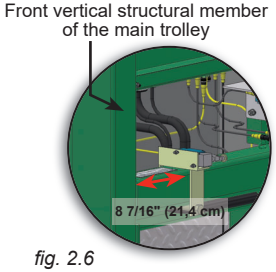


fig. 2.6

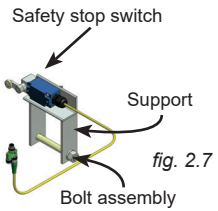


fig. 2.7

Safety Devices

Safety Stop
(sold separately)

Installation of the safety stop switch (cont'd)

2- Retrieve the switch assembly. Remove the bolt assembly from the support (fig. 2.7, p. 41).

3- Insert the support over the horizontal structural member on the main trolley, at 8 7/16" (21,5 cm) from the inside of the front right vertical structural member, as shown in fig. 2.6, p. 41, making sure the rocking arm of the switch faces toward the inside of the main trolley.

4- Secure the support in place with the bolt assembly.

5- Locate the middle horizontal structural member on the third full mast section from base level ("3" in fig. 2.10).

Installation of the trigger on the mast

6- Bolt the safety stop trigger to the middle horizontal structural member of the third full mast section.

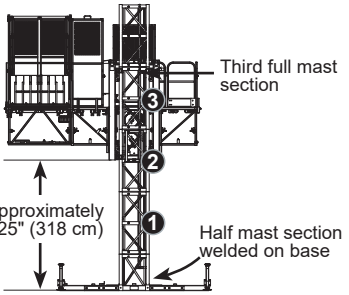


fig. 2.10

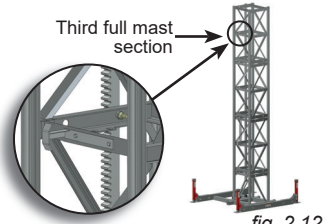


fig. 2.11 *fig. 2.12*

Connection of the safety stop switch

7- Locate the top limit cable under the control panel (TOP LIMIT port, fig. 2.14) and disconnect it. This operation must be performed by a **qualified erector/dismantler** or a **qualified technician**. For the definition of a qualified erector/dismantler or a qualified technician, refer to p. 7 of the *Performance and Safety Rules* section.

8- Retrieve the rigid Y connector (parallel) (fig. 2.15) and connect it to the TOP LIMIT port (fig. 2.14).

9- Connect the safety stop switch to the rigid Y connector.

10- Connect the top limit cable to the rigid Y connector.

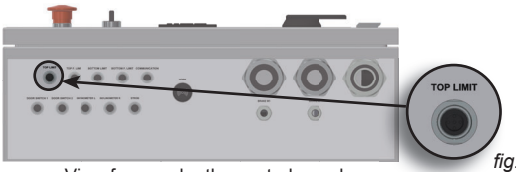


fig. 2.13

View from under the control panel

fig. 2.14

Rigid Y connector

fig. 2.15

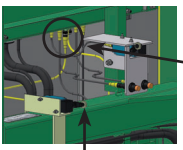


fig. 2.16

Safety stop switch

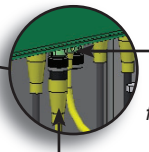


fig. 2.17

Safety stop cable

Safety Devices

Gate Detection Switches

The modular transport platform system is equipped with gate detection switches that will prevent operation of the motorized unit if one of the gates is opened and its switch is triggered.

1- Locate the DOOR SWITCH 1 and DOOR SWITCH 2 ports under the control panel (fig. 2.19). This operation must be performed by a **qualified erector/dismantler** or a **qualified technician**. For the definition of a qualified erector/dismantler or a qualified technician, refer to p. 7 of the *Performance and Safety Rules* section.

fig. 2.18

View from under the control panel

fig. 2.19

fig. 2.20

2- Run and secure each gate detection cable through the structure in such a way that it does not impede movement.

3- Connect one gate detection cable in the DOOR SWITCH 1 port and the other gate detection cable in the DOOR SWITCH 2 port (fig. 2.19).

4- Activate each door switch port on the display screen (fig. 2.20). This operation must be performed by a **qualified erector/dismantler** or a **qualified technician**. For more information about activating functions on the display panel, refer to p. 73 of the *Control Panel* section.

5- Open each gate assembly and verify the operation of the gate detection switch. Make sure all connections are secure and tight. For instructions on how to properly open and close a gate assembly, refer to p. 56 and p. 57 of the *Transport Components* section.

fig. 2.21

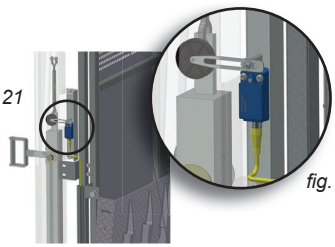


fig. 2.22

Location of gate detection switch

fig. 2.23

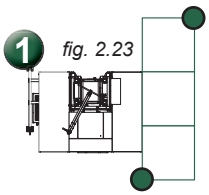
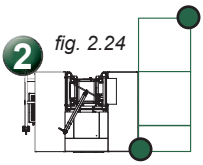


fig. 2.24



Location of gate detection switch

6- If any of the detection switches is not working properly, the unit must be put out of service until it has been inspected and repaired by a qualified person. For the definition of a qualified person, refer to p. 7 of the *Performance and Safety Rules* section. For more information about switches and their corresponding alerts, refer p. 67 of the *Control Panel* section. Make sure all the appropriate options are activated on the display screen (see fig. 2.20).

Safety Devices

Verification of sensors, switches and screen alerts
Qualified technician or qualified erector/dismantler only

The adjustment, testing and resetting of the following sensors and switches **must be performed only by a qualified erector/dismantler** or a **qualified technician**. For the definition of a **qualified erector/dismantler** or **qualified technician**, refer to p. 7 of the *Performance and Safety* section.

For the testing of sensors and switches to be performed by a **qualified operator**, refer to p. 46 of this section.

Preparation of the motorized unit

1- Turn on the main disconnect switch, pull out the emergency stop button and unlock the display screen (fig. 2.25). Make sure that the inclinometer and communication options have been disabled on the screen (fig. 2.28). Refer to p. 63 of the *Power Pack and Operating Components* section for instructions on how to turn on the main power. For information about the functions and alerts of the display screen, refer to p. 67 of the *Control Panel* section.

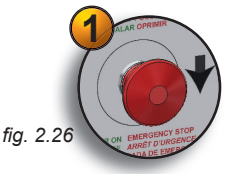


fig. 2.26

Emergency stop button

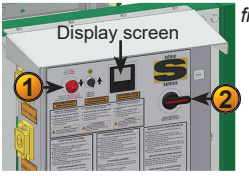


fig. 2.25

Control panel

fig. 2.28

Inclinometer and communication options disabled

fig. 2.27

Main disconnect switch

2- Make sure that the control panel does not detect any event that would prevent the safe and proper operation of the unit. It is important to note that when the motorized unit is at base level and resting on the buffers, the screen will display an alert for the bottom final limit (BFL). The unit will not be allowed to travel up or down when a BFL alarm is present.

Adjusting the bottom limit and bottom final limit trigger

3- Make sure to install at least one mast section other than the one supplied with the unit . Refer to p. 76 of the *Mast and Mast Ties* section for instructions on the installation of mast sections.

4- Loosen the bolt and raise the bottom limit/bottom final limit (BL/BFL) trigger (see fig. 2.29 and fig. 2.30, p. 45) by about 12" (30 cm). Tighten the bolt to secure the trigger in place.

5- Perform a position reset on the display screen (fig. 2.33, p. 45) to allow the motorized unit to travel upwards. For instructions on how to perform a position reset, refer to p. 74 of the *Control Panel* section.

6- Raise the motorized unit until it reaches the BL/BFL trigger. The motorized unit will stop and the screen will display an alert for the bottom final limit (BFL).

7- Loosen the bolt and lower the BL/BFL trigger and set its position so the bottom limit sensor **stops the motorized unit at least 7" (18 cm) above the top of the buffers on the base** (fig. 2.32, p. 45). Tighten the bolt to secure the trigger in place.

8- Perform a position reset on the display screen (fig. 2.33, p. 45) to allow the motorized unit to travel downwards.

NOTICE

On S Series motorized units bearing serial numbers S-0068 and up, triggering the bottom final limit (BFL) or the top final limit (TFL) will cause a fault of the bottom (or top) final limit circuit: this will **lock** the **motorized unit** and **prevent operation**. In such a case, only a qualified erector dismantler or a qualified technician can unlock the motorized unit.

Safety Devices

Verification of sensors, switches and screen alerts
Qualified technician or qualified erector/dismantler only

Testing the bottom final limit switch

9- Locate the bottom final limit switch (fig. 2.35). To test the switch, lift the arm. If the switch is working properly, the screen will display an alert for the bottom final limit (BFL) and the unit will not be allowed to travel downwards. Release the arm of the switch.

10- Perform a position reset on the display screen (fig. 2.33) to allow the motorized unit to travel downwards. For instructions on how to perform a position reset, refer to p. 74 of the *Control Panel* section.

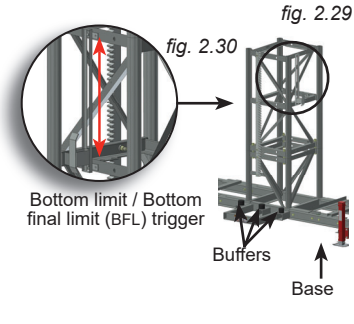


fig. 2.29

fig. 2.30

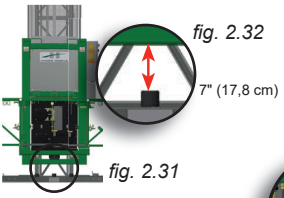


fig. 2.32

fig. 2.31

fig. 2.33

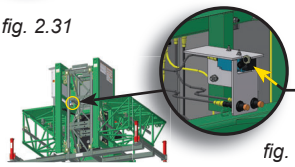


fig. 2.34

fig. 2.35

Testing the top final limit switch

11- With the motorized unit at base level (above the BL/BFL trigger), test the top final limit switch by carefully raising the unit, using extreme caution, until it is above the first mast section. If the switch is working properly, the screen will display an alert and prevent upward travel.

12- Lower the motorized unit to base level until the BL alarm is displayed on the screen. The screen will then also display a “TOP FINAL LIMIT” (top final limit fault) alert, preventing the motorized unit to travel upwards.

13- Perform a position reset on the screen to allow the motorized unit to travel upwards.

14- If any of the switches or sensors is not working properly, the unit must be put out of service until it has been inspected and repaired by a qualified person. For the definition of a qualified person, refer to p. 7 of the *Performance and Safety Rules* section. For more information about switches and their corresponding alerts, refer p. 67 of the *Control Panel* section.

Safety Devices

Verification of sensors, switches and screen alerts
Qualified operator

The adjustment, testing and resetting of the following sensors and switches **can be performed by a qualified operator**. For the definition of a **qualified operator**, refer to p. 7 of the *Performance and Safety Rules* section.

For the testing of sensors and switches to be performed by a **qualified erector/dismantler** or a **qualified technician**, refer to p. 44 of this section.

Preparation of the motorized unit

1- Turn on the main disconnect switch, pull out the emergency stop button and unlock the display screen (fig. 2.36). Make sure that the inclinometer and communication options have been disabled on the screen (fig. 2.39). Refer to p. 63 of the *Power Pack and Operating Components* section for instructions on how to turn on the main power. For information about the functions and alerts of the display screen, refer to p. 67 of the *Control Panel* section.

fig. 2.37

Emergency stop button

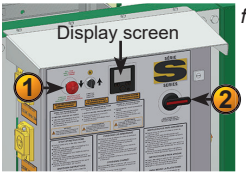


fig. 2.36

Control panel

fig. 2.39

Inclinometer and communication options disabled

fig. 2.38

Main disconnect switch

2- Make sure that the control panel does not detect any event that would prevent the safe and proper operation of the unit. It is important to note that when the motorized unit is at base level and resting on the buffers, the screen will display an alert for the bottom final limit (BFL). The unit will not be allowed to travel up or down when a BFL alarm is present.

Testing the bottom limit sensor

3- To test the bottom limit sensor, raise the motorized unit by about 12" (30 cm) then lower it again. If the switch is working properly, the motorized unit will stop and no longer be able to go down, the panel will display an alert, and the distance measured between the bottom tube of the main frame and the top of the buffers on the base will be **at least 7" (18 cm)**. If necessary, call a qualified erector/dismantler or a qualified technician to adjust the detection distance or replace the bottom limit sensor. The adjustment or the replacement of the bottom limit sensor must only be performed by a qualified erector/dismantler or a qualified technician.

Testing the top limit sensor

4- Remove the aluminum cover located under the control panel.

5- Test the top limit switch by placing a metal object in front of it. If the switch is working properly, the screen will display an alert and prevent upward travel. If necessary, call a qualified erector/dismantler or a qualified technician to adjust the detection distance or replace the top limit switch. The adjustment or the replacement of the top limit switch must only be performed by a qualified erector/dismantler or qualified technician.

Testing the gate sensors

6- Replace the aluminum cover.

7- Make sure all gates are closed properly.

8- With the motorized unit slightly above the bottom limit sensor, open the front (unloading) gate. If the gate sensor is working properly, the panel will display an alert and prevent any travel (up or down). If the bottom limit sensor is not working properly, call a qualified erector/dismantler or a qualified technician..

Safety Devices

Verification of sensors, switches and screen alerts
Qualified operator

Testing the gate sensors (cont'd)

9- Repeat step 8 for the rear (loading) gate sensor.

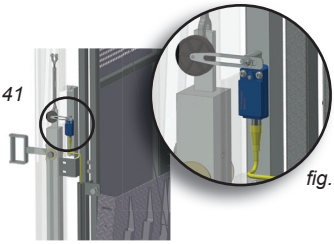


fig. 2.41

fig. 2.42

Location of gate detection switch

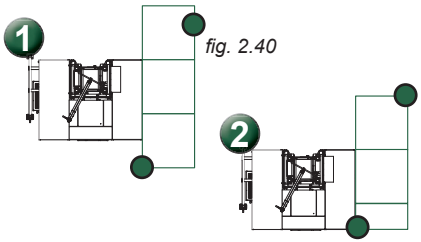


fig. 2.40

fig. 2.43

Location of gate detection switch

Testing the safety stop

10- With the motorized unit at base level, raise the motorized unit and make sure it does not stop until it is 12' (3,7 m) above base level.

11- Lower the motorized unit and make sure it stops for three seconds when it is 10' (3 m) above base level.

Testing the emergency stop button on the control panel

12- With the motorized unit at base level, raise the motorized unit.

13- While the motorized unit is rising, press the emergency stop button on the control panel. If the button is working properly, the motorized unit will stop immediately.

14- With the motorized unit on the first full mast section, lower the motorized unit.

15- While the motorized unit is lowering, press the emergency stop button on the control panel. If the button is working properly, the motorized unit will stop immediately.

fig. 2.45

Emergency stop button

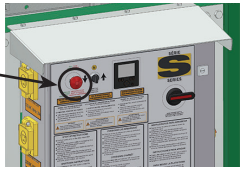


fig. 2.44

Control panel

16- If any of the switches or sensors is not working properly, the unit must be put out of service until it has been inspected and repaired by a qualified person. For the definition of a qualified person, refer to p. 7 of the *Performance and Safety Rules* section. For more information about switches and their corresponding alerts, refer p. 67 of the *Control Panel* section.

Transport Platform Components

The modular transport platform system for the S Series can be installed in two configurations. Each installation method applies to a **right-hand** modular transport platform setup using an S Series motorized unit installed following either one of these two configurations. The transport platform guardrails (high), the platform gates and the related components must be installed once all tie levels have been installed to the top of the work.

Each component (bridge, guardrail, door assembly, filler, etc.) must be installed in a specific location for each configuration.

Recommended order of installation of transport platform components

5' x 15' (1,5 m x 4,5 m) transport platform configuration

1

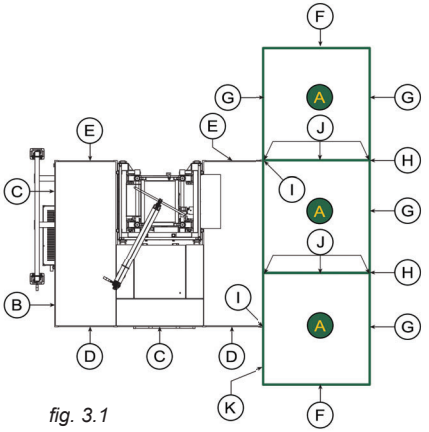


fig. 3.1

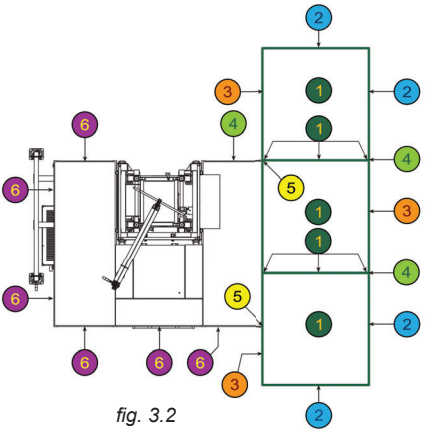


fig. 3.2

fig. 3.3

ORDER	ITEM	CODE	DESCRIPTION	QTY
1	A	20003D05-0-00000-1	BRIDGE 60" TYPE 5 ASS'Y	3
6	B	21002030-0-00000-2	GUARD RAIL 27" ASS'Y	1
6	C	21002001-0-00000-2	GUARD RAIL 60" ASS'Y TYPE 2	2
6	D	21002301-0-00000-2	GUARD RAIL 30" ASS'Y TYPE 2	2
6 4	E	50002300-0-00000-2	GUARD RAIL 36"x84" ASS'Y	2
2	F	21004302-0-00000-2	TP ACCESS DOOR MAIN ASS'Y TYPE 3	2
2 3	G	21002H01-0-00000-2	TP GUARD RAIL 60" x 84" ASS'Y TYPE 2	4
4	H	21002L00-1-10000-2	TP GUARD RAIL STRAIGHT FILLER	2
5	I	21002M00-1-10000-2	TP GUARD RAIL CORNER FILLER	2
1	J	20011000-0-00000-4	EXTENSION FORWARD ASS'Y - F	10
3	K	21002020-0-00000-2	TP GUARD RAIL 29" x 84" ASS'Y	1

Transport Platform Components

Recommended order of installation of transport platform components

5' x 12.5' (1,5 m x 3,8 m) transport platform configuration

2

fig. 3.4

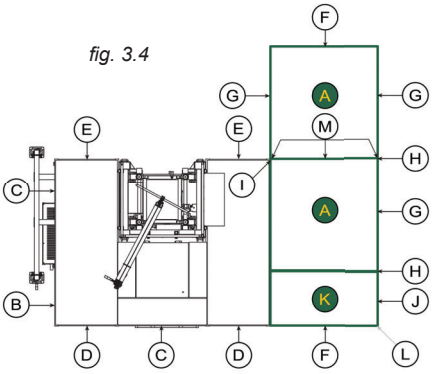


fig. 3.5

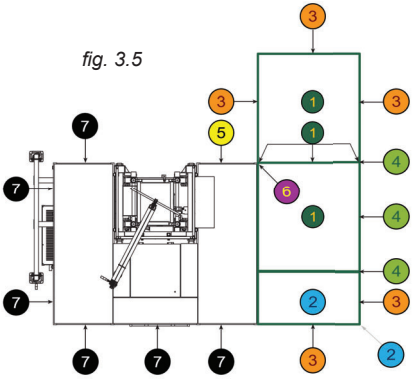


fig. 3.6

ORDER	ITEM	CODE	DESCRIPTION	QTY
1	A	20003D05-0-00000-1	BRIDGE 60" TYPE 5 ASS'Y	2
7	B	21002030-0-00000-2	GUARD RAIL 27" ASS'Y	1
7	C	21002001-0-00000-2	GUARD RAIL 60" ASS'Y TYPE 2	2
7	D	21002301-0-00000-2	GUARD RAIL 30" ASS'Y TYPE 2	2
5 7	E	50002300-0-00000-2	GUARD RAIL 36"x84" ASS'Y	2
3	F	21004302-0-00000-2	TP ACCESS DOOR MAIN ASS'Y TYPE 3	2
3 4	G	21002H01-0-00000-2	TP GUARD RAIL 60" x 84" ASS'Y TYPE 2	2
4	H	21002L00-1-10000-2	TP GUARD RAIL STRAIGHT FILLER	2
6	I	21002M00-1-10000-2	TP GUARD RAIL CORNER FILLER	2
3	J	21002Q00-0-00000-2	TP GUARD RAIL 28" x 84" ASS'Y	1
2	K	20003G02-0-00000-2	BRIDGE EXTENSION TYPE 2 ASS'Y - F	1
2	L	30009000-0-00000-4	MAST TIE SHORT ASS'Y	2
2	L	21011500-0-00000-2	DECK EXTENSION SUPPORT POCKET ASS'Y	4
2	L	20008901-0-00000-2	CROSS BOX ASS'Y	2
2	L	20008203-K-01000-2	OUTRIGGER 63" THK (.125) KIT - F	5
1	M	20011000-0-00000-4	EXTENSION FORWARD ASS'Y - F	5

Transport Platform Components

The S Series modular transport platform system is made up of bridges, platform gates, guardrails and fillers. Each component must be installed properly to ensure safety and efficiency.

For the recommended order of installation of each component, refer to the configuration chosen for the setup, starting on p. 48.

Bridge components

fig. 3.7

5' (1,5 m) bridge

fig. 3.8

Forward extension plates set

fig. 3.9

63" (160 cm) outrigger

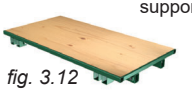
fig. 3.10

Cross box

fig. 3.11

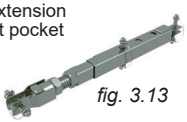
Deck extension support pocket

fig. 3.12



60" (152 cm) deck extension

fig. 3.13



Short mast tie assembly

Standard 5' (1,5 m) Bridge

The S Series standard 5' (1,5 m) bridge is installed directly on the unit, as a front extension or as a back extension (configuration #1 only).

Installation directly on a motorized unit

The following steps apply to the bridge installed directly on the unit in configuration #1 and configuration #2, as shown below.

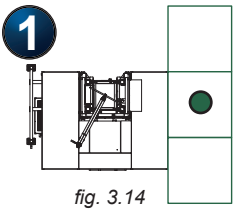


fig. 3.14

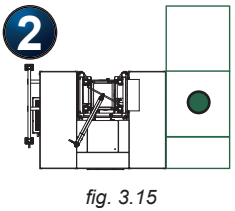


fig. 3.15

fig. 3.17

Tapered bushing

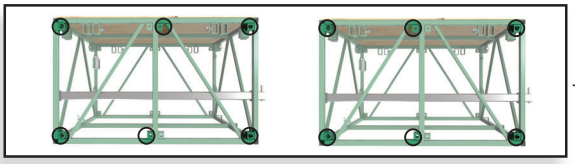


fig. 3.16

fig. 3.18

Tapered bushing

1- Align the bridge with the motorized unit using the tapered bushings (fig. 3.17 and fig. 3.18).

2- Assemble both structures together using **six** bolt assemblies: one 5/8" x 5 1/2" (GR8) hex bolt, one 5/8" (GR8) lock washer and one 5/8" (GR8) nut in each of the four corner tapered bushings and in **one** of the pairs of bushings in the middle of the bridge (using top and bottom bushings on either side – left **or** right, fig. 3.16). Tighten all bolt assemblies with a torque of 120 lb-ft (163 N-m).

Transport Platform Components

Bridges

Standard 5' (1,5 m) Bridge

Installation as a front or rear extension

The bridge installed on the front of the modular transport platform setup is assembled using a 5' (1,5 m) bridge, two outriggers and five extension plate assemblies.

The following steps apply to the bridge installed as a front and rear extension in configuration #1 and as a front extension in configuration #2, as shown below.

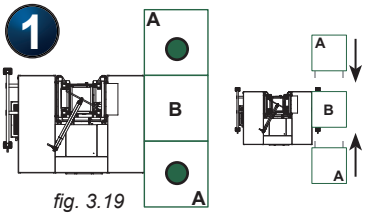


fig. 3.19

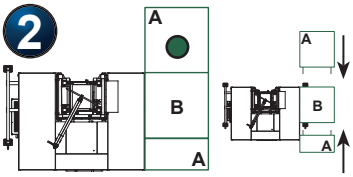


fig. 3.20

1- Remove the plank stop pins from two outriggers and slide the outriggers in the bottom outrigger pockets of the bridge assembly to be installed (shown as “A” in fig. 3.19 and in fig. 3.20), leaving about 6" (15 cm) jutting out from the bridge. Do not tighten the bolts.

2- Align the bridge with the installed bridge and slide the protruding ends of the two outriggers from the bridge assembly in the bottom outrigger pockets of the bridge already installed (shown as “B” in fig. 3.19 and in fig. 3.20). Insert a plank stop pin in each outrigger.

3- Install two extension plate assemblies at the **TOP** of **each** of the two vertical tubes at each end of the bridge assembly (fig. 3.22). If using only previous generation bridges, install the third extension plate assembly on the middle vertical tube of the bridge, secure the bolt assemblies and proceed to step 5.

4- If using at least one new generation bridge in the installation, install the third extension plate assembly at the **TOP** in the middle of the bridge structure by positioning the plates so the holes align with the holes on the plate in the middle of the bridge structure (fig. 3.24). Secure with bolt assemblies.

5- Tighten all the bolts on the outrigger pockets and on the extension plates with a torque of 30 lb-ft (41 N-m).

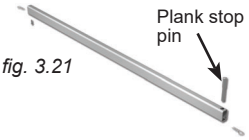


fig. 3.21

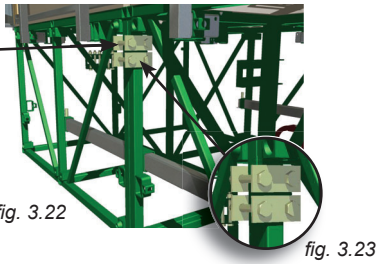


fig. 3.22

fig. 3.23

Connection of previous generation bridge (right) with new generation bridge (left)

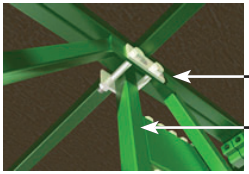


fig. 3.24

Connection of two new generation bridges

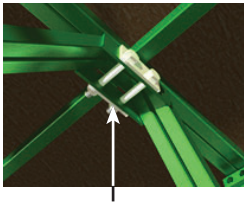


fig. 3.25

Transport Platform Components

Bridges

Reinforced 60" (152 cm) Deck Extension

Installation of the deck extension and the top support assembly

The S Series reinforced 60" (152 cm) deck extension is installed on a standard 5' (1,5 m) bridge as a back extension.

The following steps apply to the deck extension and the top support assembly installed in configuration #2, as shown below.

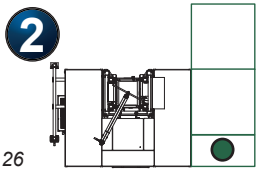
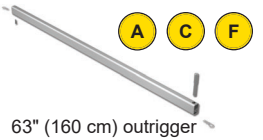


fig. 3.26

fig. 3.27

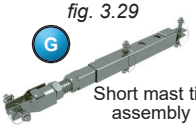


63" (160 cm) outrigger

fig. 3.28

Deck extension support pocket

fig. 3.29



Short mast tie assembly

fig. 3.30

60" (152 cm) bridge deck extension

fig. 3.31

Cross box

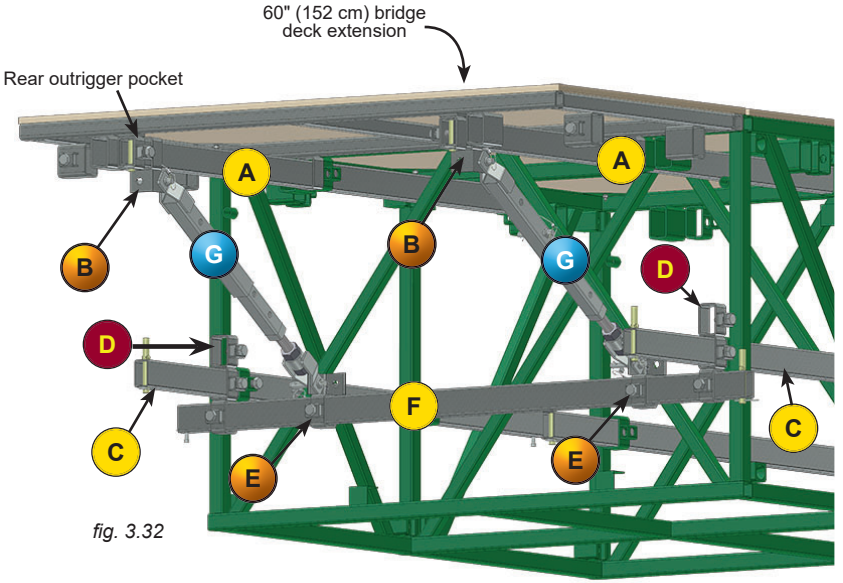


fig. 3.32

Transport Platform Components

Bridges

Reinforced 60" (152 m) Deck Extension

Installation of the deck extension and the top support assembly (cont'd)

1- Choose a clean, level area, away from construction traffic. Set the deck extension upside down, with the plywood side on the ground (fig. 3.33).

2- Remove the plank stop pin, clevis pin and hitch pin clip from two 63" (160 cm) outriggers.

A **3-** Insert the outriggers in the front outrigger pockets on the deck extension by a few inches (centimeters) only (fig. 3.34).

B **4-** Slide a deck extension support pocket onto each outrigger (fig. 3.35). Do not tighten the bolts on the deck support pockets yet.

5- Push in the outriggers until they clear the outrigger pockets at the other end (fig. 3.36).

6- Lift and flip the deck extension and align it with the top outrigger pockets of the bridge.

7- Insert the outriggers on the deck extension in the top outrigger pockets of the bridge and push in the extension until it is snug against the bridge. Make sure that the outriggers go through the rear and middle outrigger pockets on the bridge.

8- Replace the clevis pin and hitch pin clip on the outriggers. Replace the plank stop pins and push in the outriggers until they are snug against the deck extension.

9- Tighten the outrigger pocket bolts with a torque of 30 lb-ft (41 N-m). Do not tighten the bolts on the deck support pockets yet.

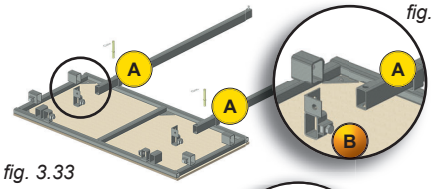


fig. 3.33

fig. 3.34

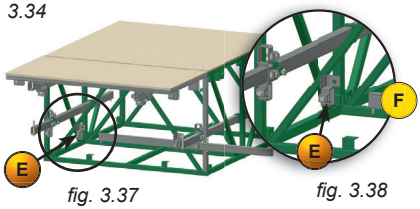


fig. 3.37

fig. 3.38

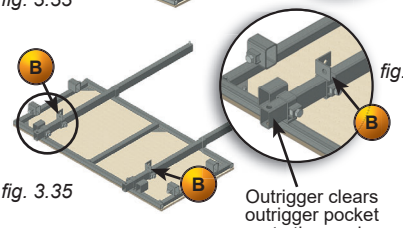


fig. 3.35

fig. 3.36

Outrigger clears outrigger pocket at other end

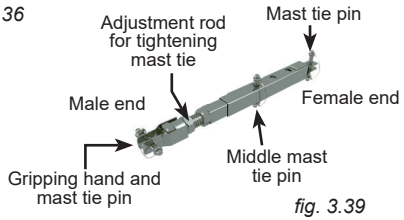


fig. 3.39

Installation of the bottom support assembly

C **10-** Remove the plank stop pin, clevis pin and hitch pin clip from two 63" (160 cm) outriggers.

11- Insert the outriggers in the bottom outrigger pockets. Make sure that the outriggers go through the rear and middle outrigger pockets of the bridge.

D **12-** Replace the clevis pin and hitch pin clip on the outriggers.

13- Slide a cross box on each outrigger. Replace the plank stop pin on each outrigger.

F **14-** Remove the plank stop pin, clevis pin and hitch pin clip from a 63" (160 cm) outrigger.

15- Insert the outrigger through one cross box.

E **16-** Slide two deck extension support pockets on the outrigger (fig. 3.36). Do not tighten the bolts on the deck support pockets yet.

17- Insert the outrigger through the other cross box.

18- Replace the plank stop pin on the outrigger.

19- Push in the outriggers until the cross boxes are snug against the bridge structure. Tighten the outrigger and cross box pocket bolts with a torque of 30 lb-ft (41 N-m).

Transport Platform Components

Bridges

Reinforced 60" (152 cm) Deck Extension

Installation of the support arms

G **20-** Remove the mast tie pin at the female end of short mast tie assemblies (fig. 3.39, p. 53).

B **21-** Secure the female end of the short mast tie assemblies the top deck extension support pockets with the mast tie pins.

22- Remove the mast tie pin at the male end of the mast tie assemblies (on the gripping hand, fig. 3.39, p. 53).

G **23-** Remove the middle mast tie pin (fig. 3.39, p. 53) from the assemblies and push each top deck extension support pocket against the outer outrigger pocket. Tighten the pocket bolts with a torque of 30 lb-ft (41 N-m) to secure the supports in place.

E **24-** Make a coarse adjustment of the mast tie assemblies to align them with the bottom deck extension support pockets. Put the middle mast tie pins back into place.

G **25-** Loosen the adjustment rod (fig. 3.39, p. 53) to align the male end of the mast tie assemblies and the bottom deck extension support pockets.

26- Secure the male end of the assemblies to the bottom deck extension support pockets with the mast tie pins.

27- Straighten the alignment of the bottom support pockets and secure in place by tightening the pocket bolts with a torque of 30 lb-ft (41 N-m).

28- Strengthen the support assembly by tightening the adjustment rod on each mast tie assembly.

Platform Gates, Guardrails and Fillers

The S Series modular transport platform system is made up of bridges, platform gates, guardrails and fillers. Each component must be installed properly to ensure safety and efficiency.

For the recommended order of installation of each component, refer to the configuration chosen for the setup, starting on p. 48.

Platform Gates, Guardrails and Fillers

fig. 3.40

Main gate assembly

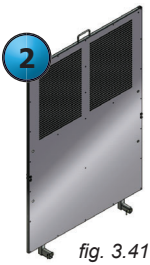


fig. 3.41

60" x 84" (152 cm x 213 cm) guardrail

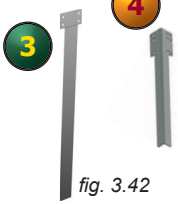


fig. 3.42

Straight filler for guardrails

Corner filler for platform gates

fig. 3.43

fig. 3.44

36" x 84" (91 cm x 213 cm) guardrail

fig. 3.45

28" x 84" (71 cm x 213 cm) guardrail

fig. 3.46

29" x 84" (71 cm x 213 cm) guardrail

Transport Platform Components

Platform Gates, Guardrails and Fillers

Platform gates

The modular transport platform is equipped with two platform gates to facilitate the movement of workers and material.

The following steps apply to the each gate assembly in configuration #1 and configuration #2, as shown below.

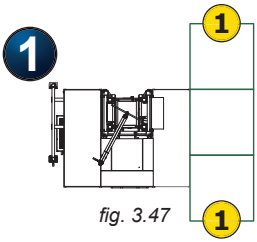


fig. 3.47

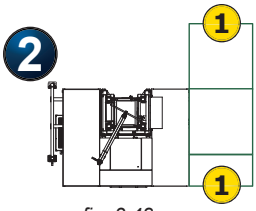


fig. 3.48

Installation

1- Insert the legs of a platform gate assembly in the two guardrail pockets located at the top of the bridge.

2- Secure the platform gate assembly in place with toggle pins.

3- Repeat steps 1 and 2 to install the second gate assembly.

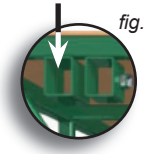


fig. 3.50

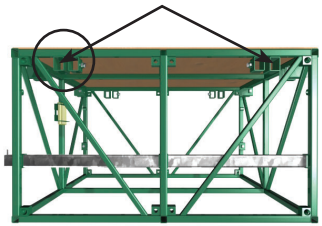


fig. 3.49

fig. 3.51

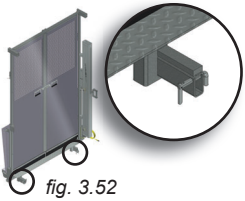


fig. 3.53

fig. 3.52

4- Connect each gate detection switch cable (“A” in fig. 3.57, p. 55) in the control panel. For instructions on the connection of the gate detection switches, refer to p. 43 of the *Safety Devices* section.

fig. 3.57

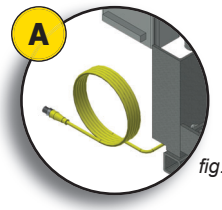


fig. 3.54

Gate detection switch cable

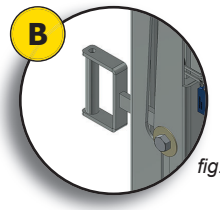


fig. 3.55

Gate operation handle

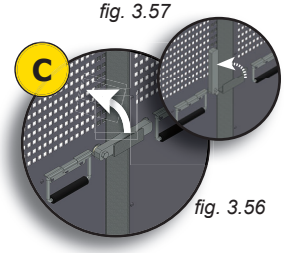


fig. 3.56

Gate locking bar

Transport Platform Components

Platform Gates, Guardrails and Fillers

Platform gates

Installation (cont'd)

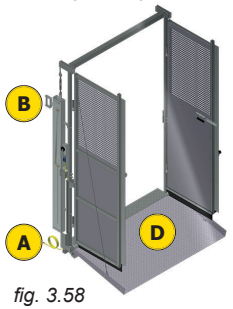


fig. 3.58

Gate assembly in opened position

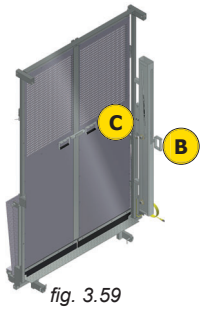


fig. 3.59

Gate assembly in closed position (view from inside)

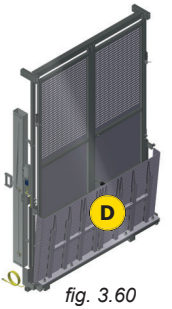


fig. 3.60

Gate assembly in closed position (view from outside)

- A Gate detection switch cable
- B Gate operation handle
- C Locking device
- D Landing ramp

Opening the gate assembly

5- Make sure the unit has come to a full stop and is positioned adequately to ensure that the landing ramp is properly seated on the landing floor level. The floor of the transport platform must be between 5 1/2" and 7" (14 cm and 18 cm) above the landing floor level, as shown in fig. 3.67.

6- Slightly lower the handle ("B" in fig. 3.58) to release it from the safety notch (as shown in fig. 3.71, p. 57) and slide it up slowly to unfold the landing ramp.

7- Lift the locking bar ("C" in fig. 3.56, p. 55 and in fig. 3.59) in a vertical position, as shown in fig. 3.57, p. 55, and push open the gates.

Angled part of landing ramp shown in red and in green for illustration purposes only

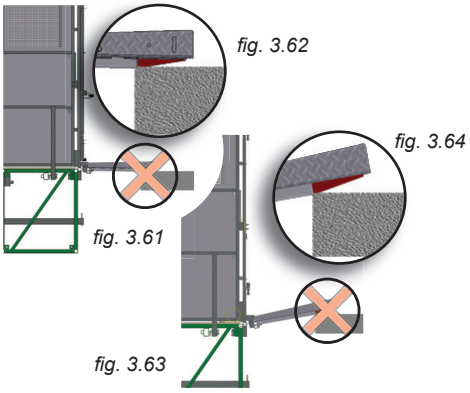


fig. 3.62

fig. 3.64

fig. 3.61

fig. 3.63

Angled part of landing ramp is **not seated properly** on the support surface

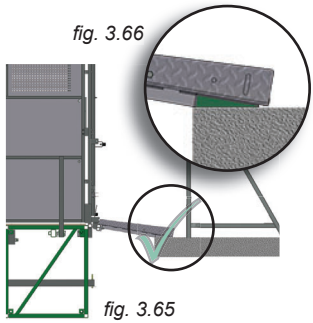


fig. 3.66

fig. 3.65

Angled part of landing ramp is **seated properly** on the support surface

fig. 3.67

Floor of transport platform between 5 1/2" and 7" (14 cm and 18 cm) above landing floor level

Transport Platform Components

Platform Gates, Guardrails and Fillers

Platform gates

Opening the gate assembly (cont'd)

8- Make sure the landing ramp is seated properly before starting any loading or unloading operation, as shown in the illustrations on p. 56.

9- Make sure the landing ramp is clear of material.

For a more efficient operation, it is suggested to make sure that each landing level is identified by markings on the mast or on the building to be clearly visible by the operator.

Closing the gate assembly

1- Make sure the landing ramp is clear of material.

2- Make sure the gate locking bar is lifted, as shown in fig. 3.68, and close the gates.

3- Lower the locking bar (fig. 3.68) to lock the gates together.

4- Slide down the handle ("B" in fig. 3.70) slowly, monitoring the folding of the landing ramp. Push the handle in the safety notch (as shown in fig. 3.71 and fig. 3.72).

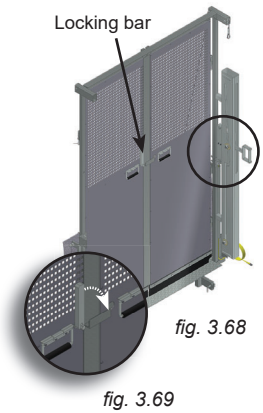


fig. 3.68

fig. 3.69

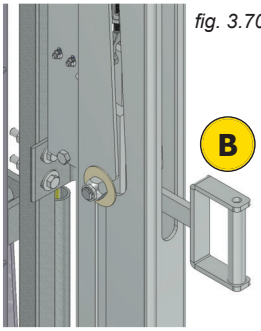


fig. 3.70

Handle locked in place

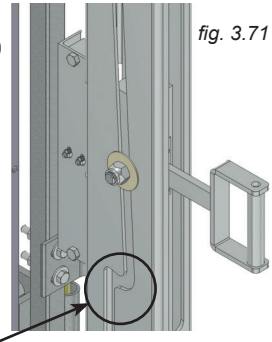
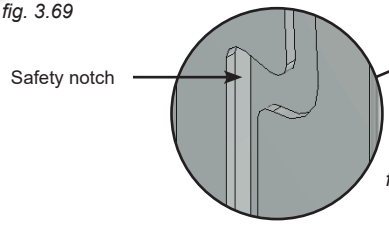


fig. 3.71



Handle released from safety notch

fig. 3.72

Loading the transport platform

1- Make sure the transport platform has been installed properly and passed for use, as described in the installation guidelines and instructions beginning on p. 17 of the *Transport Platform System* section.

2- At the start of the day or before every working shift, make sure that every step in the daily inspection checklist has been performed. Refer to p. 109 of the T*ransport, Storage and Maintenance* section for more information about the daily inspection checklist.

Transport Platform Components

Platform Gates, Guardrails and Fillers

Platform gates

Loading the transport platform

3- Open the platform gate. For instructions on how to open the platform gate, refer to p. 56 of this section.

4- Make sure that the landing ramp is seated properly on the floor slab or the support structure. For instructions on how to make sure that the landing ramp is seated properly, refer to p. 56 of this section.

5- The weight of the device used as a means of transport when loading the platform must be taken into consideration when calculating load capacities. Horizontal forces exerted when loading the transport platform must not exceed 360 lb (163 kg). Refer to the *Load Capacities* section on p. 88 for more information about loading the transport platform.

No load must be applied on a guardrail or a gate. Materials must be stored away from guardrails and gates. Nothing must be protruding from the enclosed area at all times (material, body parts, etc.). It is also forbidden for anyone to lean on a guardrail or a gate.

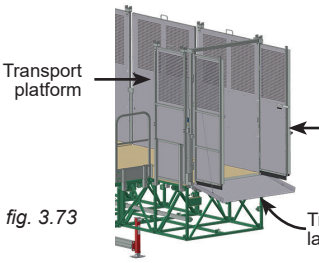


fig. 3.73

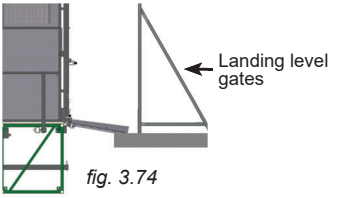


fig. 3.74

CAUTION

It is essential to make sure that the decking on the bridges used in the transport platform configuration is adequate for a transport platform application (loading and unloading operations, point loading, etc.).

6- Load material in the transport platform enclosure, making sure not to overload the platform and that the decking on the bridges has the proper bearing capacity.

7- Once loading is complete, close the platform gate and lock it properly. For instructions on how to close the platform gate properly, refer to p. 57 of the *Transport Platform Components* section.

Unloading the transport platform

1- Make sure that landing level gates have been installed at all building levels to be accessed. For best results, it is suggested to make sure that each landing level is identified by markings on the mast or on the building to be clearly visible by the operator.

2- Bring the motorized unit to the appropriate landing level.

3- The weight of the device used as a means of transport when unloading the platform must be taken into consideration when calculating load capacities. Horizontal forces exerted when loading the transport platform must not exceed 360 lb (163 kg). Refer to the *Load Capacities* section on p. 88 for more information about loading the transport platform.

4- Open the platform gate at the unloading end of the platform. For instructions on how to open a platform gate, refer to p. 56 of the *Transport Platform Components* section.

5- Make sure that the landing ramp is seated properly on the floor slab or the support structure. For instructions on how to make sure that the landing ramp is seated properly, refer to p. 56 of the *Transport Platform Components* section.

6- Once unloading is complete, close the platform gate and lock it properly. For instructions on how to close a platform gate, refer to p. 57 of the *Transport Platform Components* section.

CAUTION

The weight of the device used a means of transport when loading or unloading the transport platform must be taken into consideration when calculating load capacities. Refer to the *Load Capacities* section for more information about loading and unloading the platform.

Transport Platform Components

Platform Gates, Guardrails and Fillers

Guardrails

Guardrails are installed on the bridges and the reinforced deck extension, as required by the configuration. Once guardrails are in place, appropriate **fillers** are required to cover gaps and prevent falling objects. For instructions on the installation of fillers, refer to p. 61 of this section.

For the recommended order of installation of each guardrail, refer to the configuration and method of installation appropriate for the setup, starting on p. 48.

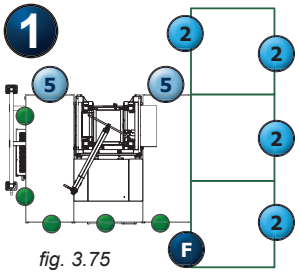


fig. 3.75

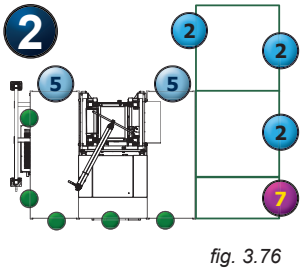


fig. 3.76

Standard (low) guardrails

fig. 3.77

60" x 84"
(150 cm x 213 cm)
guardrail

fig. 3.78

36" x 84"
(91 cm x 213 cm)
guardrail

fig. 3.79

29" x 84"
(71 cm x 213 cm)
guardrail

fig. 3.80

28" x 84"
(71 cm x 213 cm)
guardrail

Installation of a 28" x 84" (71 cm x 213 cm) guardrail

The following steps apply to configuration #2, as shown in fig. 3.81.

1- Insert the legs of the guardrail assembly in the two guardrail pockets located at the top of the bridge.

2- Secure the guardrail in place with toggle pins and install fillers where necessary.

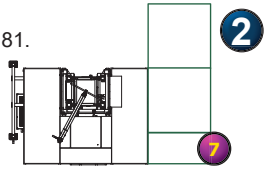


fig. 3.81

Transport Platform Components

Platform Gates, Guardrails and Fillers

Guardrails

Installation of the 36" x 84" (91 cm x 213 cm) guardrail

The following steps apply to configuration #1 and configuration #2, as shown below.

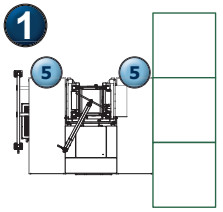


fig. 3.82

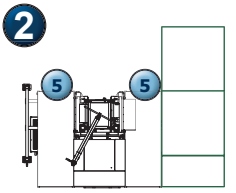


fig. 3.83

1- Insert the legs of the guardrail assembly in the two guardrail pockets located at the top of the unit.
2- Secure the guardrail in place with toggle pins and install fillers where necessary.

Installation of the 29" x 84" (74 cm x 213 cm) guardrail

The following steps apply to configuration #1, as shown below.

1- Align the bushings on the guardrail with the bushings on the bridge (fig. 3.86).
2- Insert bridge bolt assemblies in each bushing and secure in place by tightening the assemblies with a torque of 120 lb-ft (163 N-m).

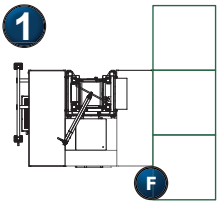


fig. 3.84

fig. 3.85

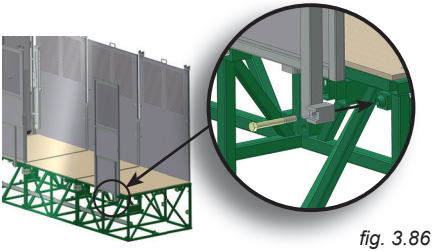


fig. 3.86

Installation of a 60" x 84" (150 cm x 213 cm) guardrail

The following steps apply to configuration #1 and configuration #2, as shown below.

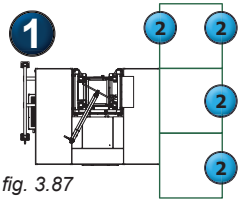


fig. 3.87

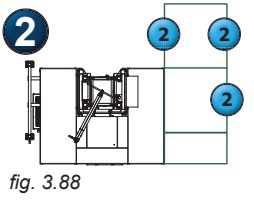


fig. 3.88

1- Insert the legs of the guardrail assembly in the two guardrail pockets located at the top of the bridge.
2- Secure the guardrail in place with toggle pins and install fillers where necessary.

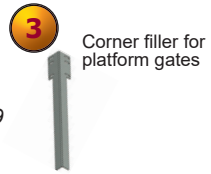
Transport Platform Components

Platform Gates, Guardrails and Fillers

Fillers

Fillers are installed between guardrails, as required by the configuration, to lock guardrails together and strengthen the platform enclosure.

The following steps apply to each guardrail required in configuration #1 and configuration #2, as shown in fig. 3.91 and fig. 3.92.



Corner filler for platform gates

fig. 3.89

fig. 3.90

Straight filler for guardrails

Installation of fillers

1- Place the appropriate filler between the two guardrails.
2- Secure in place with bolt assemblies, making sure the bolt heads are facing on the **inside** of the transport platform enclosure.

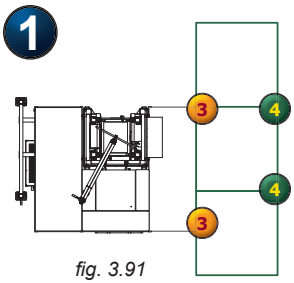


fig. 3.91

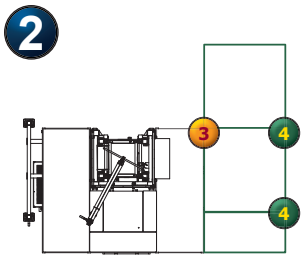


fig. 3.92

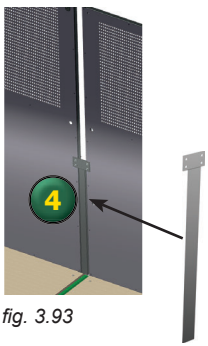


fig. 3.93

fig. 3.95

fig. 3.94

Reinforcing bracket (2) shown above are included with the gate assembly

fig. 3.96

Power Pack and Operating Components

General Guidelines

1- Select a power cable that is suitable for the height of the installation. **The installation of the power cable must be performed by a certified electrician**. Refer to the *Power Cable Selection* chart (fig. 4.1) to select the appropriate power cable for the installation. Make sure that the overall length of the cable is sufficient for the installation (height of mast, distance from power source, acceptable overall slack in cable). Contact the Hydro Mobile technical team if a cable longer than 800' (244 m) is required.

2- Install the power cable as described in the installation instructions hereafter.

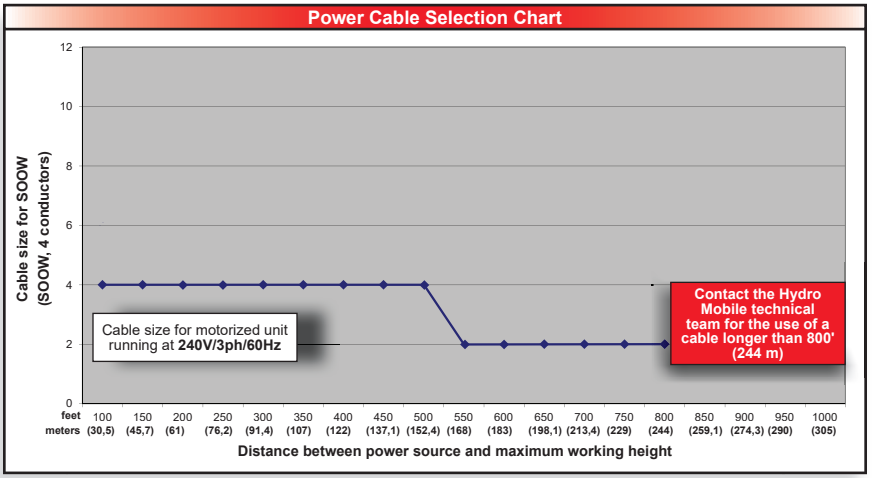


fig. 4.1

Installation of the Power Cable

Installation without an optional cable trolley

1- Retrieve the open mesh grip kit from the toolbox (fig. 4.4). Using a U-bolt and flat bar assembly, attach the open mesh grip at the bottom of a vertical tube on the bridge bolted to the unit on the same side as the control panel (fig. 4.2). Run the cable through the wire mesh grip.

2- Make sure the cable clears the base completely.

3- Connect the power cable to the control panel and to a safe and reliable power source (from the building or a generator). **This installation must be performed by a certified electrician**. Make sure that the input voltage is within the specified range. Refer to p. 13 of the *Transport Platform System* section.

4- Proceed with the motorized unit startup procedure, on p. 63.

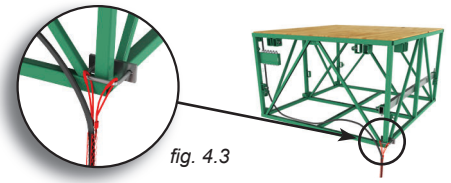


fig. 4.3

fig. 4.2

U-bolt assembly and open mesh grip

fig. 4.4

WARNING

Installation of the power cable must be performed by a certified electrician.

Power Pack and Operating Components

Installation of the Power Cable

Installation with an optional cable trolley

The S Series transport platform system must not be used on a mast with a height over 500' (152 m). To maximize efficiency and because of the speed of travel, it is recommended to use the S Series modular transport platform system on a mast with a height of 200' (61 m) or less.

On a mast with a height over 150' (45,7 m), the use of the **optional cable trolley kit** is recommended. However, it must be noted that when the optional cable trolley is installed, the **transport platform can no longer be lowered all the way down to base level**, as clearance is required under the unit for the cable trolley installation, as shown in fig. 1.29, p. 15.

1- Install the optional cable trolley kit as described in the installation instructions on p. 99 of the *Accessories* section.

2- Connect the power cable to the control panel and to a safe and reliable power source (from the building or a generator). **This installation must be performed by a certified electrician**. Make sure that the input voltage is within the specified range. Refer to p. 13 of the *Transport Platform System* section.

3- Proceed with the motorized unit startup procedure hereafter.

Motorized unit startup procedure

1- Prepare the motorized unit by following the general guidelines, on p. 62.

2- Turn on the main disconnect switch (fig. 5.1, p. 64).

3- Pull out the emergency stop button (fig. 5.1, p. 64) to power on the display screen. If the display screen does not turn on after a short period of time, make sure that the power cable is properly connected to both the power source and to the motorized unit. If the cable is connected, verify the phase selector and make sure the appropriate phase has been selected. The phase selector must be at the left (1) or right (2) position. The middle (0) position is neutral and will prevent the unit and control panel from powering on. If the display screen still does not turn on, push in the emergency stop button, turn off the main disconnect switch and contact a certified electrician or a qualified technician. For the definition of a qualified technician, refer to p. 7 of the *Performance and Safety* section.

4- Once powered on, unlock the display screen as described in the instructions on p. 65 of the *Control Panel* section.

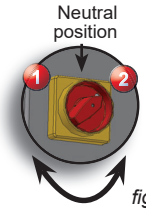


fig. 4.5

Preventing unauthorized use of the motorized unit

To prevent unauthorized use of the motorized unit, refer to p. 67 of the *Control Panel* section for instructions.

Motorized unit shutdown procedure

1- Bring the motorized unit down until the bottom limit is triggered. The screen will display an alert.

2- Lock the display screen to prevent unauthorized use. For instructions on how to lock the display screen, refer to p. 67 of the *Control Panel* section.

3- Push in the emergency stop button to shut down the control panel.

4- Turn off the main disconnect switch.

5- Before transporting or storing the unit for any significant length of time, refer to instructions on p. 108 of the *Transport, Storage and Maintenance* section.

Auxiliary power outlets are disabled when the motorized unit is moving.

Control Panel

The control panel is the brain behind the Hydro Mobile S Series system. The control panel is a combination of manual controls and a color non touch screen. Driven by a computer system programmed to detect and analyze every signal and react accordingly, the display screen will notify the operator of any important event and display appropriate instructions to respond to the alert (see figures below as well as descriptions and instructions included in the *Screen Alerts and Instructions* in the following pages). Instructions and descriptions on the control panel are displayed in three operating languages (English, French and Spanish). Screen displays and instructions are in English, French and Spanish.

It is mandatory to comply with the instructions included in the following pages for the operation of the control panel and to take prompt corrective action when required. For any event other than those described in this manual, contact the distributor/service center or the Hydro Mobile technical team.

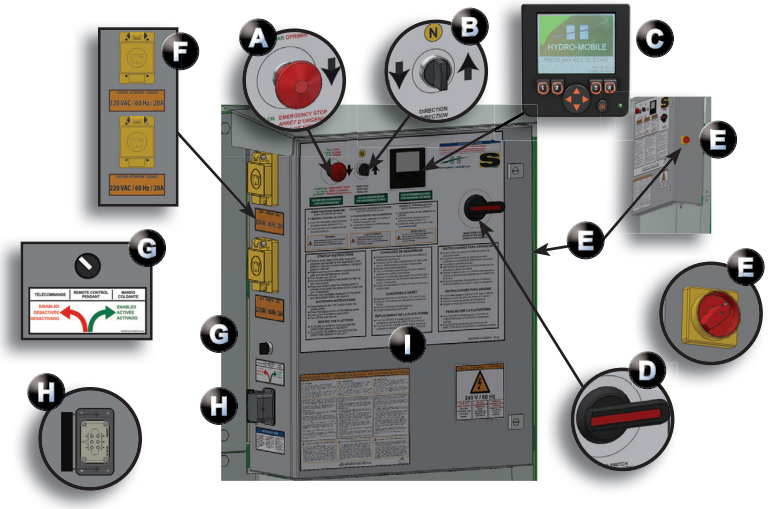


fig. 5.1

Control panel components	
A Emergency stop button	E Phase sequence selector
B Rise and descent selector	F Power outlets (120 and 220 VAC)
C Display screen	G Remote control pendant switch
D Main disconnect switch	H Remote control pendant connection port
	I Control panel instructions

fig. 5.2

If the display screen does not turn on after a short period of time, make sure that the power cable is properly connected both to the power source and to the motorized unit and that the appropriate phase has been selected. If the display screen still does not turn on, turn off the main disconnect switch and contact a certified electrician or a qualified technician.

Control Panel

fig. 5.3

Control panel controls		
Control	**Description**	**Action**
Rise and descent selector	Controls the travel direction of the unit.	Turn and hold the selector to the right to raise the platform. Turn and hold the selector to the left to lower the platform.
Emergency stop button	Shuts down the power to the control panel in the course of normal operation or in case of an emergency.	**In the course of normal operation**, push in the emergency stop button to shut down the power to the control panel when the unit is not in use. **In case of emergency**, push in the emergency stop button to shut down the power to the control panel.
Main disconnect switch	Turns the main power on or off.	Turn the handle down to power on (clockwise). Turn the handle up to power off (counterclockwise).
Phase selector	Selection of the phase sequence.	Turn the selector to the left (1) or right (2) position. Middle (0) position is neutral; the unit and panel cannot be powered on.
Control screen	Non touch screen (with options and navigation buttons) displaying alerts and instructions.	Refer to information included in the following pages to appropriately understand each of the messages displayed on the screen.

fig. 5.4

Screen alerts and instructions

Unlocking the display screen

1- Turn on the main disconnect switch. Pull out the emergency stop button.

2- If the display screen does not turn on after a short period of time, make sure that the power cable is properly connected to both the power source and to the motorized unit. If the cable is connected, verify the phase selector and make sure the appropriate phase has been selected. The phase selector (“E” in fig. 5.1, p. 64) must be at the left (1) or right (2) position (see fig. 4.5, p. 63). The middle (0) position is neutral and will prevent the unit and control panel from powering on. If the display screen still does not turn on, turn off the main disconnect switch and contact a certified electrician or a qualified technician. For the definition of a qualified technician, refer to p. 7 of the *Performance and Safety* section.

3- Once the panel is powered on, press on any key under the display screen to activate it.

4- Once on the access code entry page, it is possible to change the display language by pressing the rightmost button (button 4 on fig. 5.5, p. 66).

5- If an event is detected by the control panel, the ALM rectangle will blink (above button 3 in fig. 5.5, p. 66) to indicate it. The display screen must be unlocked to display the alert info screen.

6- To enter the operating access code (default “10”), press on the OK button. Once the input box is blinking, use the UP and DOWN arrows (on the navigation button) to change the value, then press OK to unlock the display screen. The default operating access code can be changed by a qualified erector/dismantler or a qualified technician. For the definition of a qualified erector/dismantler or a qualified technician, refer to p. 7 of the *Performance and Safety Rules* section.

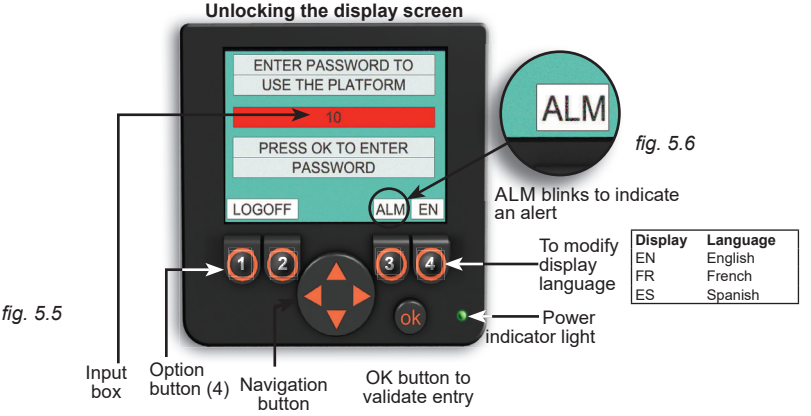
Control Panel

Screen alerts and instructions

Unlocking the display screen (cont'd)

7- Once unlocked, the screen displays the main menu page. Press on the appropriate option button to go to the selected option.

Unlocking the display screen



Display	Language
EN	English
FR	French
ES	Spanish

fig. 5.6

fig. 5.5

Note: Numbers on the option buttons in the images on the following pages are displayed as an example only. Actual messages displayed may differ from picture.

fig. 5.8

Main menu screen

fig. 5.7

Screen	Description	Access level
F1 – Status info	Information on the status of the unit and its components (gate sensors, total runtime hours, etc.)	**Operator**
F2 – Alarms	Information on any event detected by the control panel that could prevent the unit and its components to operate safely	**Operator**
F3 – Inputs and outputs	Status of various controls, sensors and switches linked to input and output ports	**Operator**
F4 – Configuration	Screens allowing the modification of certain options for the unit or the installation (enabling gate sensors, modifying user-level password, resetting maintenance runtime counter, etc.)	**Erector/ Dismantler (level 1)**
Pressing twice on OK button	Entry-level access page to log out and lock panel	**Operator**

F1 – Status info

Access level: User / Operator

This two-page section displays general information about the unit and the installation.

1- Press F1 on the main menu screen (button 1 on the main menu screen display example in fig. 5.7).

2- Change display pages with the option buttons (buttons 1 and 2 in fig. 5.9, p. 67).

3- Press the BACK button (button 4 in fig. 5.9, p. 67) to return to the main menu page.

Control Panel

Screen alerts and instructions

F1 – Status info

Access level: User / Operator

fig. 5.9

Screen 1 of Status Info

fig. 5.11

fig. 5.10

Screen 2 of Status Info

Note: Numbers on the option buttons in the images on the following pages are displayed as an example only. Actual messages displayed may differ from picture.

Preventing unauthorized operation of the motorized unit (locking the display screen)

In order to avoid unauthorized operation of the motorized unit, perform the following steps to lock the control panel:

1- Return to the main menu on the display screen.

2- Press twice on the **OK** button under the display screen to reach the access code entry page.

3- Press on one of the **bottom left** buttons to log out of the screen.

fig. 5.13

fig. 5.14

fig. 5.15

F2 – Alerts

Access level: User / Operator

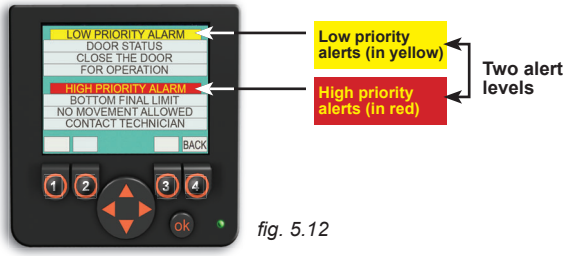


fig. 5.12

Note: Numbers on the option buttons in the images on the following pages are displayed as an example only. Actual messages displayed may differ from picture.

This section displays events detected by the control panel that could compromise the safe operation of the unit and its components. Display of the various alerts will alternate automatically if more than one page is required.

Once an event is detected, the ALM rectangle (fig. 5.12) blinks to signal an alert. This section may also be reached at all times by pressing on the ALM button (button 3 in fig. 5.10).

Press the BACK button (button 4 in the example in fig. 5.12) to return to the main menu screen.

MINOR ALERTS					
Alert	**Event**	**Action**	**UP travel**	**DOWN travel**	**Unit LOCKED**
10 FOOT STOP 3 SEC STOP TO VERIF ALL CLEAR UNDER PLATFORM	Going **DOWN**, unit stops for 3 seconds	Make sure there are no interferences under the platform Used in transport platform configurations	NOT ALLOWED	NOT ALLOWED	NO
BOTTOM LIMIT UPWARD TRAVEL ONLY	Going **DOWN**, unit stops	Bottom limit reached; only upward travel allowed	ALLOWED	NOT ALLOWED	NO
COMMUNICATION ERROR	Unit stops	COMMUNICATION option must be disabled	NOT ALLOWED	NOT ALLOWED	NO
DOOR STATUS	Unit stops	Check all doors on the installation and make sure they are closed properly	NOT ALLOWED	NOT ALLOWED	NO
INCL L > 2DEG POS GO UP OR DOWN TO LEVEL	Going **UP**, unit keeps moving Going **DOWN**, unit stops	INCL L option must be disabled	ALLOWED	NOT ALLOWED	NO
INCL L > 2DEG NEG GO UP OR DOWN TO LEVEL	Going **UP**, unit stops Going **DOWN**, unit keeps moving	INCL L option must be disabled	NOT ALLOWED	ALLOWED	NO
INCL R > 2DEG POS GO UP OR DOWN TO LEVEL	Going **UP**, unit keeps moving Going **DOWN**, unit stops	INCL R option must be disabled	ALLOWED	NOT ALLOWED	NO
INCL R > 2DEG NEG GO UP OR DOWN TO LEVEL	Going **UP**, unit stops Going **DOWN**, unit keeps moving	INCL R option must be disabled	NOT ALLOWED	ALLOWED	NO
REMOTE PANEL ALARM SEE REMOTE PANEL REMOTE PANEL OFFLINE	Unit stops when communication is used	COMMUNICATION option must be disabled	NOT ALLOWED	NOT ALLOWED	NO
REMOTE PANEL LOCK ENTER PASSWORD	Unit stops	COMMUNICATION option must be disabled	NOT ALLOWED	NOT ALLOWED	NO
TOP LIMIT DOWNWARD TRAVEL ONLY	Going **UP**, unit stops	Top limit reached; only downward travel allowed	NOT ALLOWED	ALLOWED	NO

Note: Messages highlighted in rows greyed out in the table above result from an improper configuration. The configuration options corresponding to the greyed rows must be disabled for a transport platform application

fig. 5.16

MAJOR ALERTS					
Alert	**Event**	**Action**	**UP travel**	**DOWN travel**	**Unit LOCKED**
BOTTOM FINAL LIMIT NO MOVEMENT ALLOWED CONTACT TECHNICIAN	Going **DOWN**, unit stops	Inspect the bottom limit sensor and make sure it is working properly; alarm is related to signal of BFL mechanical limit switch	NOT ALLOWED	NOT ALLOWED	NO
BOTTOM FINAL LIMIT FAULT UNIT LOCKED CONTACT TECHNICIAN	Unit stops; travel is not allowed	Unit is locked and must be reset by qualified E&D personnel or a qualified technician after inspection	NOT ALLOWED	NOT ALLOWED	YES
ELEC PHASE DETECTOR CHANGE PHASE SELECTOR CHECK MOTOR OVERLOAD	Travel is not allowed	Perform phase inversion (using phase selector on side of control panel); if problem persists, shut down main power and contact certified electrician or a qualified technician	NOT ALLOWED	NOT ALLOWED	NO
INCL L > 5DEG POS GO UP OR DOWN TO LEVEL	Unit stops	INCL L option must be disabled	NOT ALLOWED	NOT ALLOWED	NO
INCL L > 5DEG NEG GO UP OR DOWN TO LEVEL	Unit stops	INCL L option must be disabled	NOT ALLOWED	NOT ALLOWED	NO
INCL R > 5DEG POS GO UP OR DOWN TO LEVEL	Unit stops	INCL R option must be disabled	NOT ALLOWED	NOT ALLOWED	NO
INCL R > 5DEG NEG GO UP OR DOWN TO LEVEL	Unit stops	INCL R option must be disabled	NOT ALLOWED	NOT ALLOWED	NO

Note: Messages highlighted in rows greyed out in the table above result from an improper configuration. The configuration options corresponding to the greyed rows must be disabled for a transport platform application

fig. 5.17

MAJOR ALERTS					
Alert	**Event**	**Action**	**UP travel**	**DOWN travel**	**Unit LOCKED**
INPUT POWER FAULT RETURN TO BASE LEVEL ONLY	**DOWNWARD** travel only	Input voltage too low while unit is moving; return to base level; contact certified electrician and check input power	NOT ALLOWED	ALLOWED	NO
OVER AMPERAGE DOWN CHECK POWER SOURCE OR LOAD	Going **DOWN**, unit stops	Amperage draw is too high while moving DOWN; check load on platform as per configuration; check for mechanical obstruction	ALLOWED	NOT ALLOWED	NO
OVER AMPERAGE UP CHECK POWER SOURCE OR LOAD	Going **UP**, unit stops	Amperage draw is too high while moving UP; check load on platform as per configuration; check for mechanical obstruction	NOT ALLOWED	ALLOWED	NO
OVER VOLTAGE (STAT) CHECK POWER SOURCE	Travel is not allowed	Input voltage too high; contact certified electrician and check input power	NOT ALLOWED	NOT ALLOWED	NO
TOP FINAL LIMIT DOWNWARD TRAVEL ONLY CONTACT TECHNICIAN	Going **up**, unit stops; only **DOWNWARD** travel is allowed	Inspect the top limit sensor and make sure it is working properly; alarm is related to signal of TFL mechanical limit switch; only downward travel is allowed	NOT ALLOWED	ALLOWED	NO
TOP FINAL LIMIT FAULT RETURN TO BASE LEVEL ONLY CONTACT TECHNICIAN	**DOWNWARD** travel only	Downward travel is allowed until bottom limit (BL) is reached; unit then locks up and must be reset by qualified E&D personnel or a qualified technician after inspection	NOT ALLOWED	ALLOWED	NO
TOP FINAL LIMIT FAULT UNIT LOCKED CONTACT TECHNICIAN	Unit is locked; travel is not allowed	Unit is locked and must be reset by qualified E&D personnel or a qualified technician after inspection	NOT ALLOWED	NOT ALLOWED	YES
UNDER VOLTAGE (STAT) CHECK POWER SOURCE	Travel is not allowed	Input voltage too low; contact certified electrician and check input power	NOT ALLOWED	NOT ALLOWED	NO

fig. 5.18

LEGEND	
ICON	DEFINITION
OR	Alert (yellow for minor, red for major)
	UPWARD travel is allowed
	DOWNWARD travel is allowed
	Not allowed
	Unit is locked
	Qualified personnel
	Certified electrician
TECH	Qualified E&D personnel or qualified technician

fig. 5.19

Quick Reference Table – Minor Alerts

MINOR ALERTS			
10 FOOT STOP 3 SEC STOP TO VERIF ALL CLEAR UNDER PLATFORM	X	X	
BOTTOM LIMIT UPWARD TRAVEL ONLY		X	
COMMUNICATION ERROR COMMUNICATION MUST BE DISABLED	X	X	
DOOR STATUS	X	X	
INCL L > 2DEG POS INCL L OPTION MUST BE DISABLED		X	
INCL L > 2DEG NEG INCL L OPTION MUST BE DISABLED	X		
INCL R > 2DEG POS INCL R OPTION MUST BE DISABLED		X	
INCL R > 2DEG NEG INCL R OPTION MUST BE DISABLED	X		
REMOTE PANEL ALARM COMMUNICATION MUST BE DISABLED	X	X	
REMOTE PANEL LOCK COMMUNICATION MUST BE DISABLED	X	X	
TOP LIMIT DOWNWARD TRAVEL ONLY	X		

fig. 5.20

Note: Messages highlighted in rows greyed out in the table above result from an improper configuration. The configuration options corresponding to the greyed rows must be disabled for a transport platform application

Quick Reference Tables – Major Alerts

MAJOR ALERTS				
!	↑	↓	🔒	
BOTTOM FINAL LIMIT NO MOVEMENT ALLOWED CONTACT TECHNICIAN	✕	✕		TECH
BOTTOM FINAL LIMIT FAULT UNIT LOCKED CONTACT TECHNICIAN	✕	✕	🔒	TECH
ELEC PHASE DETECTOR CHANGE PHASE SELECTOR CHECK MOTOR OVERLOAD	✕	✕		
INCL L > 5DEG POS INCL L OPTION MUST BE DISABLED	✕	✕		
INCL L > 5DEG NEG INCL L OPTION MUST BE DISABLED	✕	✕		
INCL R > 5DEG POS INCL R OPTION MUST BE DISABLED	✕	✕		
INCL R > 5DEG NEG INCL R OPTION MUST BE DISABLED	✕	✕		

fig. 5.21

Note: Messages highlighted in rows greyed out in the table above result from an improper configuration. The configuration options corresponding to the greyed rows must be disabled for a transport platform application

MAJOR ALERTS				
!	↑	↓	🔒	
INPUT POWER FAULT RETURN TO BASE LEVEL ONLY	✕	↓		⚡
OVER AMPERAGE DOWN CHECK POWER SOURCE OR LOAD	↑	✕		TECH
OVER AMPERAGE UP CHECK POWER SOURCE OR LOAD	✕	↓		TECH
OVER VOLTAGE (STAT) CHECK POWER SOURCE	✕	✕		⚡
TOP FINAL LIMIT DOWNWARD TRAVEL ONLY CONTACT TECHNICIAN	✕	↓		TECH
TOP FINAL LIMIT FAULT RETURN TO BASE LEVEL ONLY CONTACT TECHNICIAN	✕	↓		TECH
TOP FINAL LIMIT FAULT UNIT LOCKED CONTACT TECHNICIAN	✕	✕	🔒	TECH
UNDER VOLTAGE (STAT) CHECK POWER SOURCE	✕	✕		⚡

fig. 5.22

Control Panel

Screen alerts and instructions

F3 – Inputs and outputs

Access level: User / Operator

This section displays information about the various controls, sensors and switches linked to the input and output ports of the control panel. A black circle will indicate that the control panel receives a signal from a sensor (input) or sends a signal to an actuator (output). Other information will be displayed in values. These pages are mainly useful for troubleshooting operations to provide information on the condition of the unit and the setup to a remote qualified technician.

fig. 5.23

fig. 5.24

fig. 5.25

fig. 5.26

fig. 5.27

Note: Numbers on the option buttons in the images on the following pages are displayed as an example only. Actual messages displayed may differ from picture.

1- Press the F3 button on the main menu page (button 3 in fig. 5.7, p. 66).
2- Change display pages with the option buttons (buttons 1 and 2 in fig. 5.24).
3- Press the BACK button (button 4 in fig. 5.23) to return to the main menu page.

F4 – Configuration

Access level: Erector / Dismantler

This four-page section includes: one access code entry page for this section (accessible only to Erector / Dismantler level) and two pages for the modification of setup configuration options. The last page of the section is an access code entry page giving access to options available only to a qualified technician.

1- Press the F4 button on the main menu page (button 4 in fig. 5.7, p. 66).
2- On the access code entry page, press on the OK button. Once the input box is blinking, use the UP and DOWN arrows (on the navigation button) to change the value (access code available only to the erector/dismantler), then press OK to access the configuration options section pages.
3- Change display pages with the option buttons (buttons 1 and 2 in fig. 5.26).
4- Use the UP and DOWN arrows on the navigation button to reach the box to be modified.
5- Press the OK button to select the box to be modified.
6- Once the selected box is blinking, use the UP and DOWN arrows on the navigation button to change the value displayed in the box.

Control Panel

Screen alerts and instructions

F4 – Configuration

Access level: Erector / Dismantler

7- Press the OK button to confirm the change.

8- Press the BACK button (button 4 in fig. 5.29) to return to the main menu page. Access to the configuration options section will automatically be deactivated once the user leaves the section. The access code to access this level will need to be entered again.

fig. 5.28

fig. 5.30

Selected box will be highlighted in white

fig. 5.29

fig. 5.31

Note: Numbers on the above option buttons are displayed as an example only. Actual messages displayed may differ from picture.

Performing a position reset

It is required to perform a position reset of the motorized unit when adjusting the bottom final limit switch or after triggering the bottom final or top final limit. If a final limit (bottom or top) was triggered, the incident must be investigated before operation of the motorized unit can resume.

The adjustment of the bottom final limit switch and the position reset of the motorized unit **must be performed only by a qualified erector/dismantler** or a **qualified technician**. For the definition of a qualified erector/dismantler or a qualified technician, refer to p. 7 of the *Performance and Safety Rules* section.

1- Press the F4 button on the main menu page (button 4 in fig. 5.7, p. 66).

2- Change display pages with the option buttons (buttons 1 and 2 in fig. 5.32) to move to the page with the reset position box.

3- Press the OK button for the entry box to blink.

4- Use the UP and DOWN arrows on the navigation button to change the value displayed in the box (from NORMAL to RESET).

5- Press the OK button to confirm the change.

6- Resume operation of the motorized unit.

fig. 5.32

Control Panel

Screen alerts and instructions

F4 – Configuration

Access level: Erector / Dismantler

fig. 5.33

Option	Choice	Description
1 DOOR SWITCH1	ENABLE/DISABLE	**OPTION MUST BE ENABLED**
2 DOOR SWITCH2	ENABLE/DISABLE	**OPTION MUST BE ENABLED**
3 INCLINOMETER L	ENABLE/DISABLE	**OPTION MUST BE DISABLED**
4 INCLINOMETER R	ENABLE/DISABLE	**OPTION MUST BE DISABLED**
5 COMMUNICATION	ENABLE L/ENABLE R/ DISABLE	**OPTION MUST BE DISABLED**
6 OPERATOR PWD	VALUE	Option available to erector/dismantler to modify operator (entry level) password
7 PASSWORD	ENABLE/DISABLE	Option to enable or disable the operator password (entry level); when DISABLED, other means must be put in place to prevent unauthorized operation when the operator is not present
8 LEVEL1	VALUE	Option available to qualified E&D personnel to modify Level 1 E&D password
9 RESET RUNTIME	NORMAL/RESET	Option to reset the runtime counter of the unit
10 RESET POSITION	NORMAL/RESET	Option to reset position of motorized unit **USED WHEN A BOTTOM OR TOP FINAL LIMIT HAS BEEN TRIGGERED**

Note: Messages highlighted in rows greyed out in the table above result from an improper configuration. The configuration options corresponding to the greyed rows must be disabled for a transport platform application

Mast and Mast Ties

Mast Sections

The handling, installation and removal of mast sections must be performed with care to avoid mishaps that may lead to safety issues. Mast sections must be handled properly and with care to avoid damages to the racks.

Installation of a single mast section

1- Make sure that the motorized unit is positioned properly. Refer to p. 17 of the *Transport Platform System* section for more information.

2- Refer to applicable local regulations governing distances between the mast climbing work platform system and electrical lines.

3- Remove the two mast heads (fig. 6.2).

4- Using an optional jib arm (see p. 91 of the *Accessories* section) or any other appropriate lifting device such as a crane or a rough terrain forklift, lift and carry the next mast section on top of the bottom mast section.

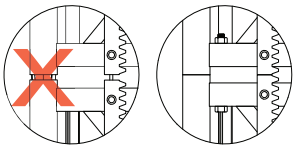
5- Make sure that the rack of the mast section is on the **rear side** (fig. 6.2) and aligned with the rack on the bottom mast section. It is recommended to handle mast sections carefully so as not to damage the mast rack(s).

6- Make sure the spring pins on the racks are in good condition and properly aligned, and that the mast sections are connected together (fig. 6.1).

7- Using 1"-8 x 8" GR8 bolts and 1" GR8 lock nuts, bolt all four corners together, making sure the bolt heads are facing down. Tighten the four bolt and nut assemblies with a torque of 150 lb-ft (203 N-m) to secure the mast section in place.

8- Repeat steps 4 through 7 for each mast section.

fig. 6.1



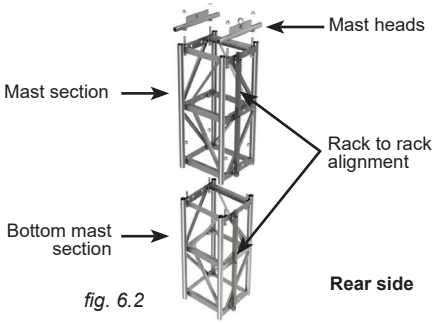


fig. 6.2

9- Make sure that each rack is sufficiently greased along the whole length of the mast. **On initial setup and subsequently after every 8 to 10 hours of cumulative runtime** (with unit traveling up and down the mast), grease must be applied to the gears, and to the rack(s) from the top of the mast down. For more information, refer to the daily inspection checklist recommended for this motorized unit. If an **aerosol open gear lubricant** is used, **grease must be allowed to stand for 2-3 hours** before the motorized unit is used again. Use an open gear lubricant recommended by Hydro Mobile. Refer to p. 109 of the *Transport, Storage and Maintenance* section for more information on the appropriate lubrication method.

10- Install the two mast heads on the last mast section and keep them in place until the setup is dismantled. If mast heads are not used, make sure that the last mast section has **no rack** or only **one rack** that is **toward the face of the work**.

NOTICE

It is critical to inspect, clean and grease the gears and rack of a Hydro Mobile S Series transport platform system following the recommended inspection schedules. Failure to clean and grease the gears and rack properly and in a timely fashion can lead to equipment damage and premature wear of the gears, the rack and pinion.

Mast and Mast Ties

Mast Sections

Installation of a single mast section (cont'd)

11- For instructions on the installation of assembled lengths of mast sections, refer to the installation instructions on p. 26 of the *Transport Platform System* section and to the instructions on the use of the multiple mast handler on p. 104 of the *Accessories* section.

Removal of a single mast section

1- To remove one mast section, make sure the two mast heads have been removed. Mast sections must be handled carefully so as not to damage the mast rack.

2- Remove the four bolt assemblies joining the top mast section to the bottom one and, using an optional jib arm or any other appropriate lifting device such as a crane or a rough terrain forklift, lift the top mast section off the bottom mast section.

3- Carefully store the mast section vertically on the motorized unit or on one of the two cantilever bridges bolted on the motorized unit. It is important to refer to the dismantling instructions on p. 37 of the *Transport Platform System* section for the maximum load allowed on the motorized unit and bridges during dismantling operations.

4- For instructions on the removal of assembled lengths of mast sections and information regarding the maximum load allowed during dismantling operations, refer to the dismantling instructions on p. 38 of the *Transport Platform System* section and to the instructions on the use of the multiple mast handler on p. 104 of the *Accessories* section.

fig. 6.3

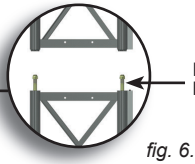


fig. 6.4

Transport and storage of mast sections

1- For best results when transporting mast sections in horizontal bundles, it is recommended to strap them in groups of three (3), lying on a side which has no rack.

2- Mast sections must be stored on a flat surface, vertically or lying horizontally on a side which has no rack, away from work areas and construction traffic.

Pre-Installation of Tie Levels

General guidelines

1- The pre-installation of all tie levels is mandatory for an S Series modular transport platform system and consists in the installation of all mast sections and tie levels necessary to reach the full height of the mast, as required and allowed, **before** passing the installation for use and beginning normal operation of the setup.

2- The S Series modular transport platform system must not be used on a mast with a height over 500' (152 m). To maximize efficiency and because of the speed of travel, it is recommended to use the S Series modular transport platform system on a mast with a height of 200' (61 m) or less.

WARNING

Transport platform components (extension bridges, high guardrails, gates, etc.) must not be installed until all required tie levels are installed to the top of the work.

It is mandatory to **install all required tie levels** up to the top of the setup following the schedule of installation **before** passing the installation for use and starting any work. Failure to install all tie levels as required by the mast tie schedule for an S Series modular transport platform application before starting any work could compromise the integrity of the installation, leading to serious injury or death.

Mast and Mast Ties

Pre-Installation of Tie Levels

Calculating the proper sequence for tie level distribution

The installation of tie levels for an S Series modular transport platform system must be performed according to what is allowed by the *Mast Tie Schedule*, on p. 81.

The distribution of tie levels is crucial to limit load reaction in the ties and stress on the mast. A progressive increase or decrease in tie level spacings ensures limited reaction. Since the configuration of a structure or a building may require the installation of tie levels at irregular spacings, it is important to calculate the **difference between tie spacings** to make sure that it is **never greater than 15' (4,6 m)**, whether spacings increase or decrease. It is also important to make sure that the tie spacing is appropriate according to the mast tie schedule.

For example, with the first two tie levels installed respectively at 15' (4,6 m) (“B” in fig. 6.5) and 35' (10,7 m) (“C” in fig. 6.5), tie spacings total 15' (4,6 m) from A to B, and 20' (6,1 m) from B to C as shown in fig. 6.5. The difference between those two tie spacings comes to **5' (1,5 m)**, which is within the acceptable range.

A third tie level can be installed 5' (1,5 m) above the second tie level (scenario “1” below) but no higher than 30' (9,1 m) above the second tie level (scenario “4” below), to remain within the range specified by the mast tie schedule, even though the difference between tie spacings would be within the acceptable tie spacing difference, as shown in fig. 6.5.

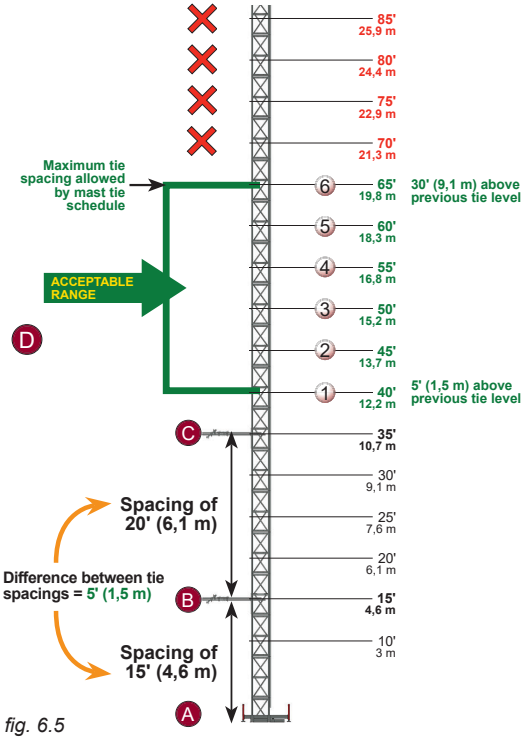


fig. 6.5

6

Spacing area	Tie distances	Difference between tie spacings
C to D	30' (9,1 m)	10' (6,1 m)
B to C	20' (6,1 m)	
B to C	20' (6,1 m)	5' (1,5 m)
A to B	15' (4,6 m)	

OR

5

Spacing area	Tie distances	Difference between tie spacings
C to D	25' (7,6 m)	5' (1,5 m)
B to C	20' (6,1 m)	
B to C	20' (6,1 m)	5' (1,5 m)
A to B	15' (4,6 m)	

OR

4

Spacing area	Tie distances	Difference between tie spacings
C to D	20' (6,1 m)	0
B to C	20' (6,1 m)	
B to C	20' (6,1 m)	5' (1,5 m)
A to B	15' (4,6 m)	

OR

1

Spacing area	Tie distances	Difference between tie spacings
C to D	5' (4,6 m)	15' (4,6 m)
B to C	20' (6,1 m)	
B to C	20' (6,1 m)	5' (1,5 m)
A to B	15' (4,6 m)	

OR

2

Spacing area	Tie distances	Difference between tie spacings
C to D	10' (3 m)	10' (3 m)
B to C	20' (6,1 m)	
B to C	20' (6,1 m)	5' (1,5 m)
A to B	15' (4,6 m)	

OR

3

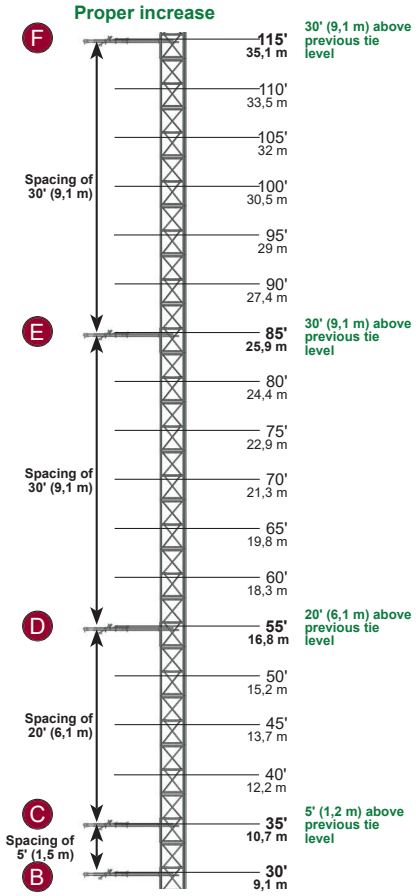
Spacing area	Tie distances	Difference between tie spacings
C to D	15' (4,6 m)	5' (1,5 m)
B to C	20' (6,1 m)	
B to C	20' (6,1 m)	5' (1,5 m)
A to B	15' (4,6 m)	

Mast and Mast Ties

Pre-Installation of Tie Levels

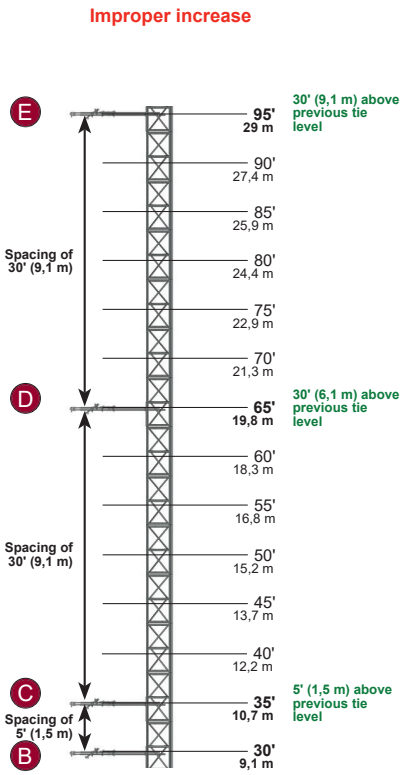
Calculating the proper sequence for tie level distribution (cont'd)

Structure or building configurations may require the installation of tie levels at varied spacings that increase as the installation goes up in height. Example in fig. 6.6 shows proper increase in tie spacings while fig. 6.7 shows improper increases in tie level spacings. While tie spacings in fig. 6.7 are within what is required by the mast tie schedule, the difference between tie spacing B to C and C to D is not within the acceptable range of tie spacing difference.



Spacing area	Tie distances	Difference between tie spacings
E to F	30' (9,6 m)	0
D to E	30' (9,6 m)	
D to E	30' (9,6 m)	10' (3 m)
C to D	20' (6,1 m)	
C to D	20' (6,1 m)	15' (4,6 m)
B to C	5' (1,5 m)	

fig. 6.6



Spacing area	Tie distances	Difference between tie spacings
D to E	30' (9,6 m)	0
C to D	30' (9,1 m)	
C to D	30' (9,1 m)	25' (7,6 m)
B to C	5' (1,5 m)	

fig. 6.7

Examples above starting above first tie level "A" (not shown) installed at 15' (4,6 m) above base level.

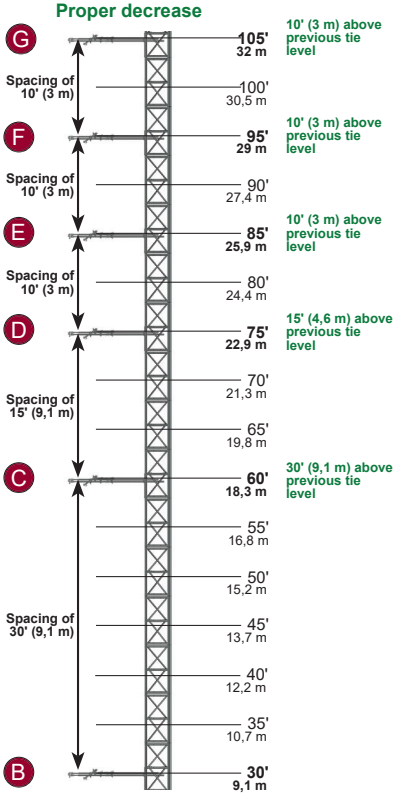
Mast and Mast Ties

Pre-Installation of Tie Levels

Calculating the proper sequence for tie level distribution (cont'd)

Structure or building configurations may require the installation of tie levels at varied spacings that decrease as the installation goes up in height. Example in fig. 6.8 shows proper decrease in tie spacings while fig. 6.9 shows improper decreases in tie level spacings. While tie spacings in fig. 6.9 are within what is required by the mast tie schedule, the difference between tie spacing B to C and C to D is not within the acceptable range of tie spacing difference.

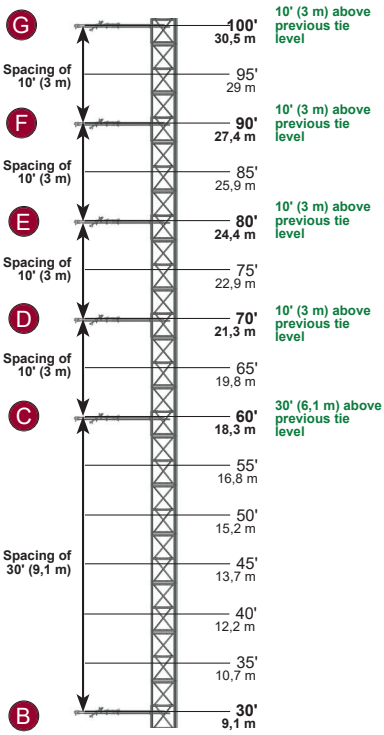
Proper decrease



Spacing area	Tie distances	Difference between tie spacings
F to G	10' (3 m)	0
E to F	10' (3 m)	
E to F	10' (3 m)	0
D to E	10' (3 m)	
D to E	10' (3 m)	5' (1,5 m)
C to D	15' (4,6 m)	
C to D	15' (4,6 m)	15' (4,6 m)
B to C	30' (9,1 m)	

fig. 6.8

Improper decrease



Spacing area	Tie distances	Difference between tie spacings
F to G	10' (3 m)	0
E to F	10' (3 m)	
E to F	10' (3 m)	0
D to E	10' (3 m)	
D to E	10' (3 m)	0
C to D	10' (3 m)	
C to D	10' (3 m)	20' (7,6 m)
B to C	30' (9,1 m)	

fig. 6.9

Examples above starting above first tie level "A" (not shown) installed at 15' (4,6 m) above base level.

Mast and Mast Ties

Pre-Installation of Tie Levels

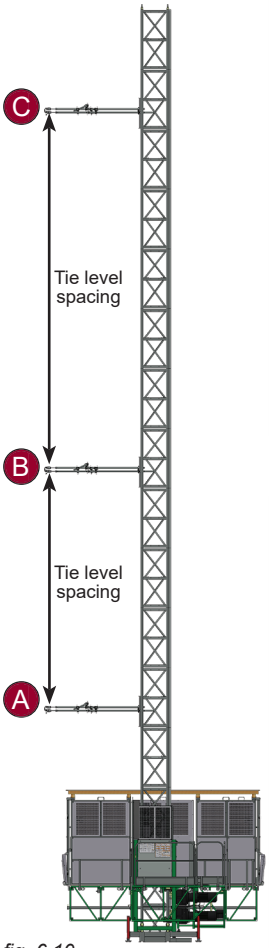


fig. 6.10

fig. 6.11

Mast Tie Schedule		
Pre-installation configuration 		
NO FREESTANDING ALLOWED		
THE PRE-INSTALLATION OF ALL TIE LEVELS IS MANDATORY		
A	A (from under base)	Between 10' (3 m) and 20' (6,1 m)
B	B (from A)	Between 10' (3 m) and 20' (6,1 m)
C	C (from B) and subsequent	Up to 30' (9,1 m)
Maximum difference between tie level spacings		15' (4,6 m)
Height of mast above last tie level **with two tie levels in place**		10' (3 m)
Height of mast above last tie level **with one tie level in place**		NOT ALLOWED

fig. 6.12

Mast Tie Schedule		
Transport platform configuration 		
NO FREESTANDING ALLOWED		
THE PRE-INSTALLATION OF ALL TIE LEVELS IS MANDATORY		
A	A (from under base)	NOT ALLOWED
B	B (from A)	NOT ALLOWED
C	C (from B) and subsequent	Up to 20' (6,1 m)
Maximum difference between tie level spacings		15' (4,6 m)
Height of mast above last tie level **with two tie levels in place**		10' (3 m)
Height of mast above last tie level **with one tie level in place**		NOT ALLOWED

CAUTION

It is **important** to note that the tie distance allowed when adding additional mast sections and tie levels on a setup already in use and in a transport platform configuration is less than what is allowed for pre-installation. Make sure to refer to the mast tie schedule suitable for the task at hand.

Mast and Mast Ties

Pre-Installation of Tie Levels

WARNING

It is **mandatory** to make sure that overtravel at the top of the mast is prevented. Install the mast heads supplied with the motorized unit (fig. 6.14) or make sure that the last mast section at the top has **no rack** or **only one rack** that is **toward the face of the work** (fig. 6.15). The top limit trigger must be installed in the prescribed location according to the method chosen to prevent overtravel.

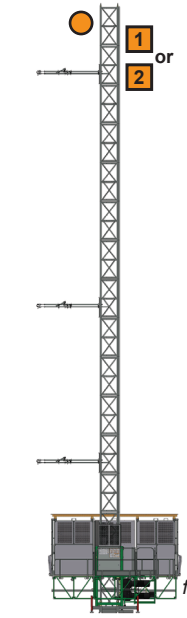


fig. 6.13

Prevention of overtravel (top)

Top limit trigger

Location of top limit trigger

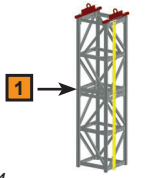
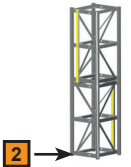


fig. 6.14

Mast with mast heads



Last mast section inverted

fig. 6.15

Note: Mast heads are shown in red and racks are shown in yellow for illustration purposes only

Angle of installation of mast ties

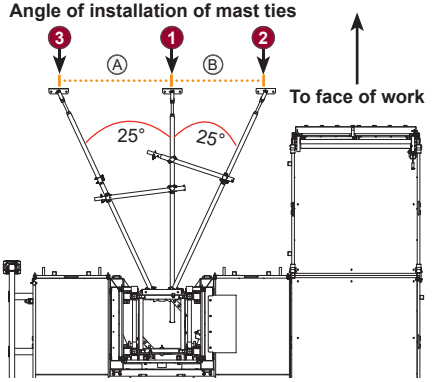


fig. 6.16

Recommended order of installation

1. Perpendicular mast tie to be installed first
2. Opposite angled mast tie to be installed second (angled at 25°)
3. Third mast tie to tighten the tie installation (angled at 25°)

Distance between wall ties

Ⓐ 52 3/4" (135 cm)

Ⓑ 43 1/2" (110 cm)

Distances in fig. 6.6 are given as a reference only. These distances apply to a setup installed at 88 1/4" (229,5 cm) from the face of the work with a recommended overlap of 6" (15,5 cm).

WARNING

The **erection** and **dismantling** of a transport platform (including the motorized unit, the base, the platform enclosure, the masts, the mast ties and all the other components) must not be conducted when wind speeds exceed **28 mph (45 km/h)**. A transport platform **must not be operated** when wind speeds exceed **35 mph (56 km/h)**.It is important to inspect every component of a transport platform installation that has been exposed to winds exceeding 102 mph (164 km/h).

When the transport platform is not in use:

- The motorized unit must be brought down to base level
- All loads must be removed from the transport platform, including the motorized unit

Mast and Mast Ties

Pre-Installation of Tie Levels

Mast tie requirements

fig. 6.17

Mast Tie Requirements		
Ref	**Component**	**Quantity**
A	36" (91 cm) mast tie assembly	3
B	60" (152 cm) mast tie extension assembly	3
C	36" (91 cm) mast tie extension assembly	2
D	rigid dual clamps	9
E	wall tie brackets	3
F	swivel dual clamps	4

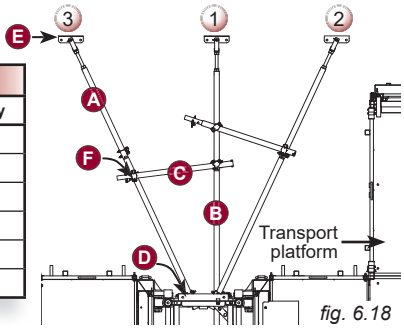


fig. 6.18

The installation of an S Series modular transport platform system requires the use of mast ties with extensions measuring a **maximum of 86" (208,5 cm) in length**. It is **mandatory** to use mast tie braces, swivel dual clamps and additional clamps for such tie configurations.

Installation of mast ties with extensions

1- Align the holes on the mast tie frame with the holes on the mast section. Attach the mast tie frame to the mast section with assemblies of bolts, square washers, lock washers and nuts (4) (fig. 6.19). Tighten all bolt assemblies with a torque of 80 lb-ft (108 N-m).

2- Choose the appropriate anchoring system. For more information about the anchoring system, refer to p. 85 of this section.

3- Anchor the middle wall tie bracket to the building structure in the appropriate position (“1” in fig. 6.18), taking into account that the perpendicular mast tie must be installed on the tube inside the mast tie frame that is closest to the transport platform.

4- Following the order of installation, anchor the other two wall tie brackets (“2” and “3” in fig. 6.18) at the angle of installation shown in fig. 6.16, p. 82.

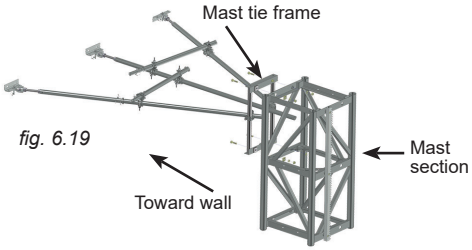


fig. 6.19

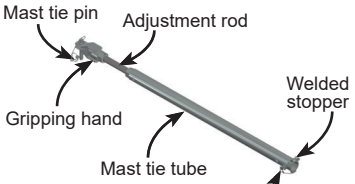


fig. 6.20

fig. 6.21

Rigid dual clamp

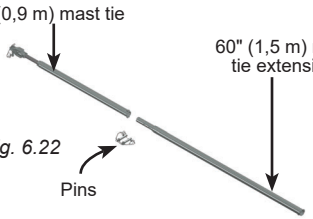


fig. 6.22

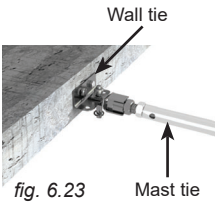


fig. 6.23

Mast and Mast Ties

Pre-Installation of Tie Levels

Installation of mast ties with extensions (cont'd)

5- Insert a 60" (152 cm) mast tie extension into the tube of a 36" (91,5 cm) mast tie. Secure in place with two pins (fig. 6.22, p. 83).

6- Attach a rigid dual clamp to the vertical tube of the mast tie frame. Bolt assemblies must not be tightened yet.

7- Pin the gripping hand to the wall tie.

8- Align and insert the mast tie into the rigid dual clamp. Tighten the rigid dual clamp with a torque of 60 lb-ft (80 N-m).

9- Adjust the length of the adjustment rod until the mast is plumb on its **front** axis.

10- Install additional clamps on the mast tie, in **front** and **behind** the rigid dual clamp already installed on the mast tie frame. Tighten each clamp with a torque of 60 lb-ft (80 N-m).

11- Repeat steps 5 through 10 for the mast tie that is closest to the transport platform (shown as "2" in fig. 6.18, p. 83).

12- Adjust the length of the adjustment rod until the mast is plumb on **side** axis.

13- Repeat steps 5 through 10 to install the third mast tie.

14- Adjust the length of the adjustment rod on each of the mast ties until the mast is plumb on **both** its **front** and **side** axis.

15- Once the mast is plumb, brace the mast ties by installing 36" (91 cm) mast tie extensions secured to the mast tie assemblies with swivel dual clamps (fig. 6.26).

16- Make sure all clamps are tightened with a torque of 60 lb-ft (80 N-m).

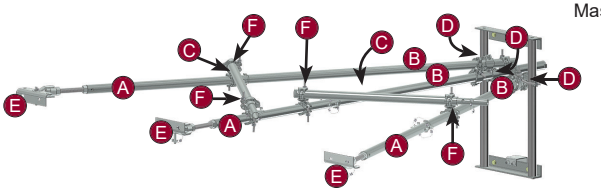


fig. 6.24

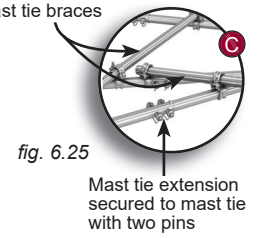


fig. 6.25

- A 36" (91,5 cm) mast tie assembly
- B 60" (152 cm) mast tie extension assembly
- C 36" (91,5 cm) mast tie extension assembly
- D rigid dual clamps
- E wall tie brackets
- F swivel dual clamps

fig. 6.26

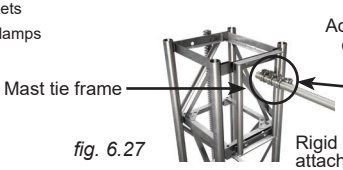


fig. 6.27

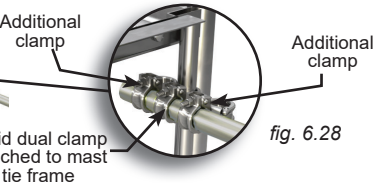


fig. 6.28

WARNING

It is important to verify each mast tie of an installation that has been exposed to winds exceeding 102 mph (164 km/h).

WARNING

When using mast ties without welded stoppers, use a bolt or an additional clamp as a stopper at the extremity of the mast tie tube attached to the mast tie frame.

Mast and Mast Ties

Pre-Installation of Tie Levels

Removal of a tie level

1- Loosen the swivel dual clamps and remove the mast tie extensions installed as braces (fig. 6.30).

2- Beginning with one of the angled mast ties (see “1” in fig. 6.29), loosen the adjustment rod to release the tension. **It is mandatory to make sure that all tension (or compression) is released from the mast tie before attempting to loosen the clamp and unpin the mast tie from the wall tie**.

3- Remove the additional clamps installed in front and behind the rigid dual clamp installed on the mast tie frame.

4- Loosen the bolts on the rigid dual clamps holding the mast tie to the mast tie frame and unpin the mast tie from the wall tie. Remove the mast tie and the rigid dual clamps.

5- Repeat steps 2 through 4 with the other mast ties.

6- Once all mast ties are removed, uninstall the mast tie frame from the mast section.

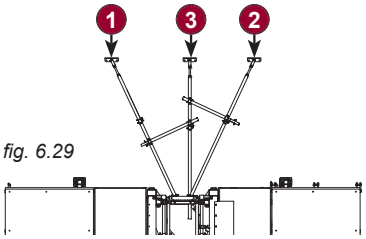


fig. 6.29

Order of removal of mast ties

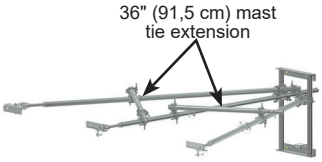


fig. 6.30

CAUTION

It is mandatory to make sure that all tension (or compression) is released from the mast tie before attempting to loosen the clamp and unpin the mast tie from the wall tie.

Anchoring System

Wall tie reactions

Before attaching masts to the building using the mast tie system, wall ties must be installed on a solid component of the building structure. It is important to understand that whether the anchoring installation is a vertical or horizontal type (fig. 6.34 and fig. 6.35), values for tension / compression and shear forces will be **inverted**.

Concrete slabs, columns, steel beams, relief angles and other structural elements can be used provided they and the anchoring system chosen can sustain 3000 lb (1361 kg) of tension / compression and 1500 lb (680 kg) of shear force for a **vertical anchoring installation** and 1500 lb (680 kg) of tension / compression and 3000 lb (1361 kg) of shear force for a **horizontal anchoring installation**. Horizontal anchoring in a transport platform application may require additional components.

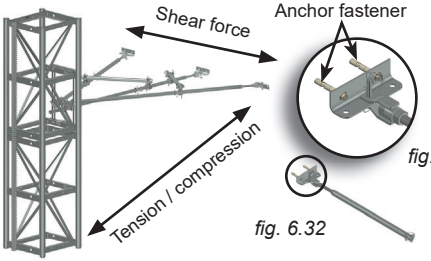


fig. 6.31

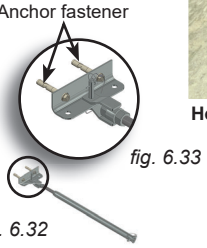


fig. 6.32

fig. 6.33

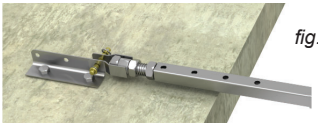


fig. 6.34

Horizontal anchoring installation

fig. 6.35

Vertical anchoring installation

Each anchor fastener shown in fig. 6.33 must be able to sustain appropriate tension / compression and shear force for the application. Refer to p. 86 of this section for more information. A total of six anchor fasteners (minimum two per wall tie bracket) is required for each tie level.

Mast and Mast Ties

Anchoring System

Installation guidelines for horizontal anchoring

Horizontal anchoring (fig. 6.34, p. 85) can only be installed at a 0° angle from horizontal. Wall ties used for horizontal anchoring installations must be able to sustain 1500 lb (680 kg) of tension/compression and 3000 lb (1361 kg) of shear force.

Installation of wall ties

Most anchor fastener manufacturers specify a maximum distance from the edge of a slab at which an anchor fastener must be installed to obtain its maximum working load. The thinner the slab, the less available area there is to maximize that working load.

In an S Series modular transport platform application tie installation, it is recommended to install the **wall tie located next to the transport platform enclosure upside-down**, allowing a better horizontal alignment of all anchor fasteners in the center of the slab, as shown in fig. 6.37.

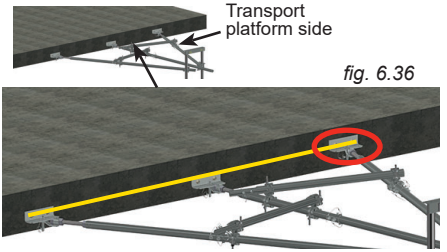


fig. 6.36

Vertical part of all wall ties installed upwards
Anchor fasteners do not align horizontally

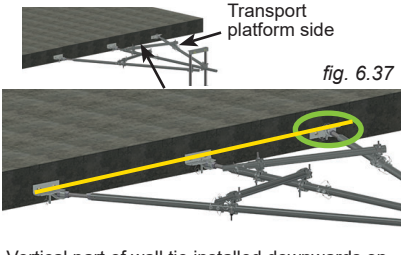


fig. 6.37

Vertical part of wall tie installed downwards on the side near the transport platform enclosure for better horizontal alignment of anchor fasteners

WARNING

It is mandatory to refer and conform to the anchor fastener manufacturer's specifications for the capacity, embedment, required distance from edge and application reduction factors of the fastener, manufacturer's recommended installation method, etc.

Wall tie types

There are 4 types of wall ties that can be used – welded, re-usable (centered or offset) and for horizontal/vertical installation. As the installation is rising, install the wall ties as per the appropriate mast tie schedule (see p. 81).

fig. 6.38

Welded wall tie

fig. 6.39

Re-usable wall tie (offset)

fig. 6.40

Re-usable wall tie (centered)

fig. 6.41

Wall tie for horizontal or vertical anchoring installation

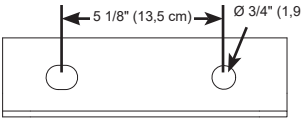


fig. 6.42

Drill-hole template for all wall ties

WARNING

It is important to note that fixed wall ties must not be used for transport platform applications.

Mast and Mast Ties

Anchoring System

Installation guidelines for a re-usable wall tie

The re-usable wall tie is installed in a wall cavity.

When dismantling the setup and removing mast ties, the re-usable wall tie is removed.

fig. 6.43

Installation of the re-usable wall tie

Installation guidelines for a welded wall tie on a beam

The welded wall tie is 6 7/8" (17,5 cm) long and must protrude from the beam by a maximum of 3 7/8" (10 cm). If an angled mast tie will be attached to the welded wall tie, the wall tie must be installed at the same angle as the mast tie.

When a welded wall tie is installed at an angle, as shown in fig. 6.46, the maximum length of 3 7/8" (10 cm) must be calculated on the longest side of the angled wall tie.

The welding electrode used must be E70-XX series.

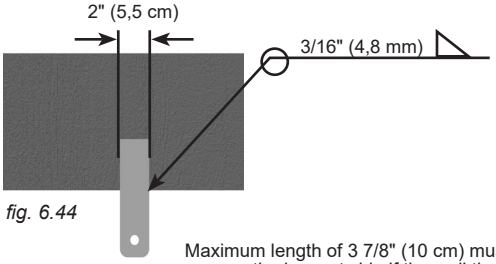


fig. 6.44

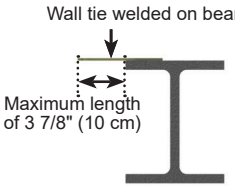


fig. 6.45

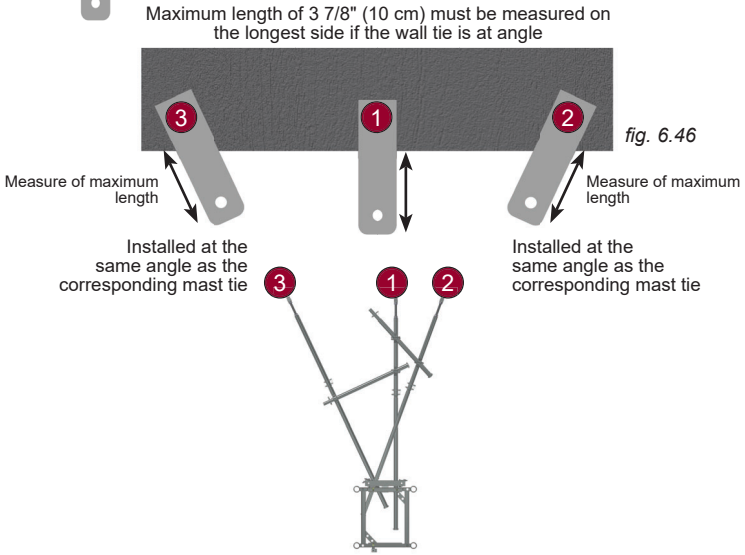


fig. 6.46

Load Capacities

General guidelines

1- To ensure safety and avoid creating any fall hazards, all platform gates and access panels on the transport platform must be closed when they are not in use and when the platform is moving. Transfer of workers and material must be safe and hazard-free. It is mandatory to install all necessary guardrails and to make sure that they are properly in place and secure at all times.

2- When the transport platform is moving, it is mandatory for all workers to stand inside the enclosed area of the platform. Nothing must overhang of be protruding from the transport platform enclosure at all times (material, body parts, etc.).

3- It is mandatory throughout the installation and dismantling of mast sections and tie levels to monitor the load on the motorized unit and bridges.

4- Each worker's weight (personal tools and equipment included) must be deducted from load capacities.

5- No load must be applied on any guardrail. Material must be evenly distributed and must clear the guardrails. No one is allowed to lean on a guardrail.

6- Make sure that materials carried in the transport platform enclosure cannot move or shift when the transport platform is moving.

7- **The load capacities charts stickers displayed on the motorized unit used in the setup will take precedence over the information included in this owner's manual.**

NOTICE

Make sure that materials carried in the transport platform enclosure cannot move or shift when the transport platform is moving.

NOTICE

The load capacities charts stickers displayed on the motorized unit used in the setup will take precedence over the information included in this owner's manual..

During Erecting and Dismantling

It is mandatory throughout the installation and dismantling of mast sections and tie levels to monitor the load on the motorized unit and bridges.

The combined load of the jib arm (if used), each mast section, all tie level components, each worker, each plank for the mast tie installation deck and any other item present on the platform must be taken into account.

Refer to and comply with the instructions of the selected method of installation (starting on p. 24 of the *Transport Platform System* section) and dismantling (starting on p. 35 of the *Transport Platform System* section) for the load allowed at each step of the process.

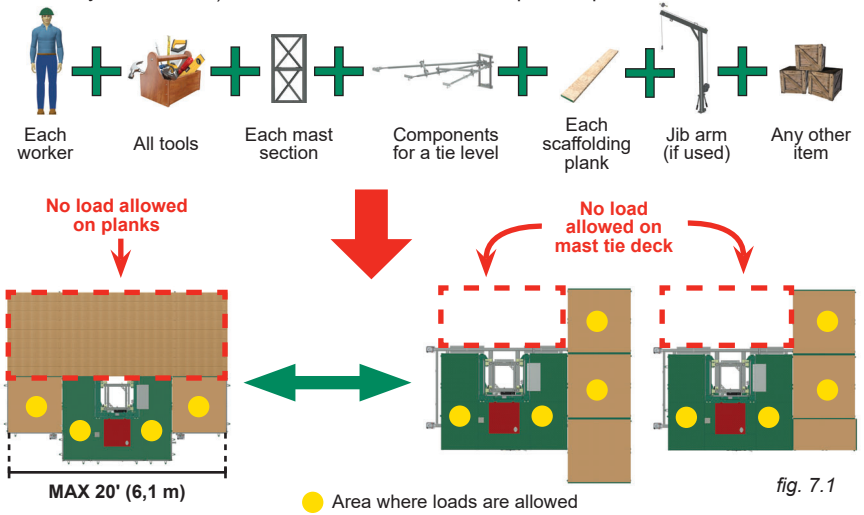


fig. 7.1

Load Capacities

During Erecting and Dismantling

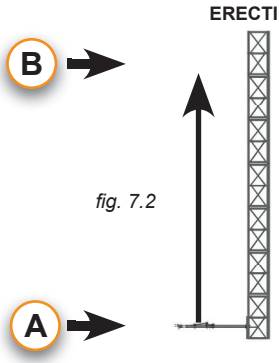


fig. 7.2

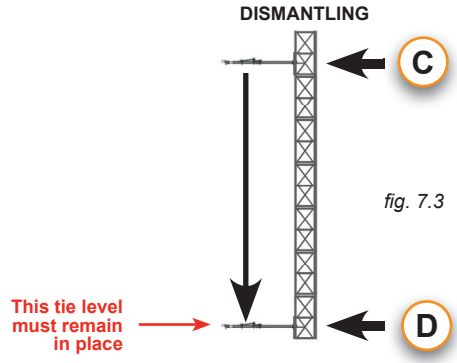
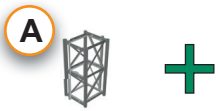


fig. 7.3

1- During the **initial installation** of a setup or when **installing additional mast sections and tie levels**, when the motorized unit is located at the first tie level or at the very last tie level installed (shown as “A” in fig. 7.2), the maximum load allowed on the motorized unit and on the bridges is the number of mast sections required to reach the next tie level **plus** 2000 lb (907 kg) which includes the components for one tie level, workers, tools, jib arm, planks and any other item present on the platform.

2- Once all required mast sections have been installed and **before installing the tie level** (shown as “B” in fig. 7.2), the load on the motorized unit and bridges must be no more than 2000 lb (907 kg) which includes the components for one tie level, workers, tools, jib arm, planks and any other item present on the platform.



Number of mast sections to install to reach the next tie level

Components for one tie level, workers, tools, jib arm, planks and any other item present on the platform

fig. 7.4

No mast sections; components for one tie level, workers, tools, jib arm, planks and any other item present on the platform

fig. 7.5

Number of mast sections to remove to reach the next lower tie level

Components for one tie level, workers, tools, jib arm, planks and any other item present on the platform

fig. 7.6

3- Throughout the **dismantling** process, when the motorized unit is located at the very last tie level installed (shown as “C” in fig. 7.3), the maximum load allowed on the motorized unit and on the bridges is 2000 lb (907 kg) which includes the components for one tie level, workers, tools, jib arm, planks and any other item present on the platform.

4- Once all required mast sections have been removed and **leaving the lower tie level** in place (shown as “D” in fig. 7.3), the load on the motorized unit and bridges must be no more than the number of mast sections removed to reach the lower tie level **plus** 2000 lb (907 kg) which includes the components for one tie level, workers, tools, jib arm, planks and any other item present on the platform.

Load Capacities

When Setup Is in Use

Modular Transport Platform System Load Capacity Chart

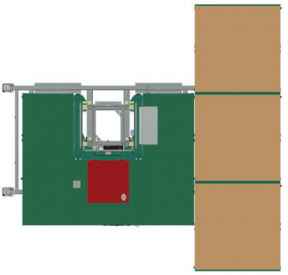
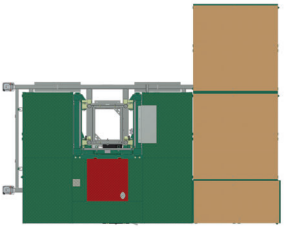
Modular Transport Platform Setup	Load Capacity
Configuration #1 5' x 15' (1,5 m x 5 m) 	1 x → 3400 lb (1542 kg) 2 x → 3200 lb (1451 kg) 3 x → 3000 lb (1361 kg) 4 x → 2800 lb (1270 kg) 5 x → 2600 lb (1179 kg) 6 x → 2400 lb (1089 kg) 7 x → 2200 lb (998 kg) 8 x → 2000 lb (907 kg) 9 x → 1800 lb (816 kg) MAX 9 x
Configuration #2 5' x 12.5' (1,5 m x 3,8 m) 	1 x → 3600 lb (1633 kg) 2 x → 3400 lb (1542 kg) 3 x → 3200 lb (1451 kg) 4 x → 3000 lb (1361 kg) 5 x → 2800 lb (1270 kg) 6 x → 2600 lb (1179 kg) 7 x → 2400 lb (1089 kg) 8 x → 2200 lb (998 kg) 9 x → 2000 lb (907 kg) MAX 9 x

fig. 7.7

Jib Arm
(optional)

The optional S Series jib arm is used to install or remove mast sections. The jib arm can be used with an interchangeable manual (factory-supplied) or electrical hoisting winch (not supplied by Hydro Mobile). With a maximum lifting capacity of 500 lb (225 kg), the jib arm must not be used to lift any material other than **one mast section at a time**.

Installation of the jib arm on the motorized unit

1- With the motorized unit at base level, remove the toggle pin and lift the cover plate of the jib arm pocket on top of the main frame (fig. 8.4).

2- Lift the jib arm assembly and slide the bottom part of the jib arm assembly into the jib arm pocket until it completely covers the pivot pin on the jib arm support plate, inside the main frame. It is recommended that the lift and installation of the jib arm assembly be performed by two persons.

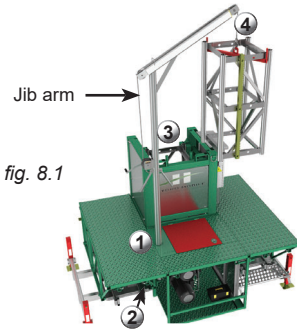


fig. 8.1

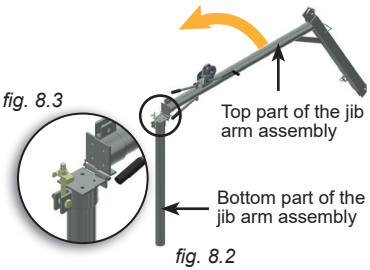


fig. 8.3

fig. 8.2

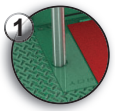


fig. 8.4

Pocket located on top of main frame

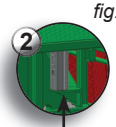


fig. 8.5

Support plate

fig. 8.6

Jib arm handles

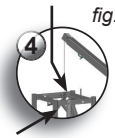


fig. 8.7

Mast handler (inside mast section)

3- Pivot the top part of the jib arm assembly (fig. 8.2) until it is completely upright. Secure in place with the toggle bolt. Tighten the bolt with a torque of 30 lb-ft (41 N-m). It is **mandatory** to make sure that the toggle bolt holding both parts of the jib arm together is tightened properly. Failure to tighten the bolt properly could result in equipment damage and lead to serious injuries, even death.

NOTICE

The jib arm has a maximum lifting capacity of 500 lb (227 kg) and must not be used to lift any material other than **one mast section at a time**. It is also important to remove the mast handler from the top of the mast section **before** moving the platform.

WARNING

It is **mandatory** to make sure that the toggle bolt holding both parts of the jib arm together is tightened properly. Failure to tighten the bolt properly could result in equipment damage and lead to serious injuries, even death.

Using the jib arm to lift a mast section

4- Attach the mast handler to the cable hook at the upper end of the jib arm (fig. 8.7).

5- Lower the cable and insert the mast handler diagonally under the top bar of the mast section to be lifted.

6- Lift and carry the mast section with the jib arm onto the top of the mast section that is already installed. Bolt the mast section in place (see p. 76 of the *Mast and Mast Ties* section for instructions).

7- Remove the mast handler from the top of the mast section **before** moving the platform.

Jib Arm
(optional)

Using the jib arm to lift a mast section (cont'd)

8- Repeat steps 5 to 7 for each mast section to be installed until the setup is complete. Make sure to install mast ties as required and prescribed. For more information about mast ties, refer to p. 83 of the *Mast and Mast Ties* section.

9- Make sure the two mast heads are installed on top of the last mast section of the setup or that the last mast section of the setup has **no rack** or only **one rack** that is **toward the face of the wor**k.

10- Once the setup is complete and the motorized unit has been brought back to base level, remove the mast handler and the jib arm.

11- Replace the cover plate on the jib arm pocket.

Mounting Bracket for Electric Chain Hoist
(optional)

The optional mounting bracket (fig. 8.14, p. 93) can be installed on the S Series jib arm to allow the use of an electric chain hoist (not provided by Hydro Mobile) instead of the manual hoisting winch supplied with the jib arm.

It is important to keep in mind that the maximum lifting capacity of the Hydro Mobile jib arm is 500 lb (225 kg) and that the weight of the electric chain hoist must be deducted from that maximum lifting capacity. The jib arm must be able to handle one mast section at a time weighing 365 lb (166 kg) if it has two racks, or weighing 330 lb (150 kg) if it has only one rack.

It is **mandatory** to select an electric chain hoist model that meets the following lifting and clearance requirements.

fig. 8.8

Minimum requirements for electric chain hoist	
Description	**Requirement**
Maximum lifting capacity of the hoist	1/2 ton or 1000 lb (454 kg)
Overall dimension ("**A**" in fig. 8.9)	24" (61 cm)
Minimum hook opening ("**B**" in fig. 8.10)	1 1/8" (2,9 cm)
Minimum lifting height (chain)	124" (309 cm)
Recommended minimum lifting height (chain):	180" (457 cm)

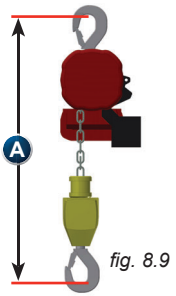


fig. 8.9

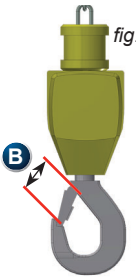


fig. 8.10

Electric chain hoist model shown for illustration purposes only

Clearance requirements for the electric chain hoist installation

Clearance between the motorized unit deck and the bottom of a mast section lifted by the jib arm (including the clearance required by the mast handler) must be adequate to allow the safe and efficient handling of mast sections.

fig. 8.11

Clearance Requirements	
Ref	**Clearance**
A	Maximum of 24" (61 cm)
B	Minimum of 60" (152 cm)
C	Minimum height of lift of 124" (309 cm) [recommended height of lift of 180" (457 cm)]
D	60" (152 cm)

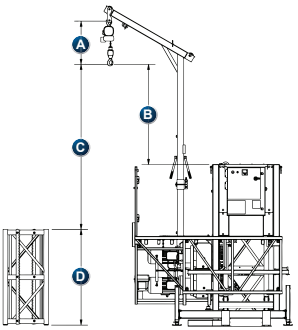


fig. 8.12

Mounting Bracket for Electric Chain Hoist
(optional)

Installation of the mounting bracket

fig. 8.13

Components of the mounting bracket		
Ref	**Component**	**Quantity**
1	5/8"-11 x 4" (GR8) hexagonal bolt	2
2	5/8"-11 (GR8) nut with nylon insert	2
3	Galvanized, reversible mounting plate	2
4	Stopper on mounting plate	4
5	Galvanized spacer tube	1

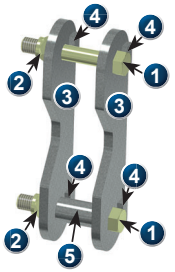


fig. 8.14

Mounting bracket (seen from rear)

1- Loosen the bolt assembly and remove the pulley at the end of the jib arm (fig. 8.15). Store the pulley and the bolt assembly properly.

2- If the manual hoisting winch must be uninstalled, remove the bolt assembly and the pulley at the rear end of the jib arm (fig. 8.16). Store the pulley and the bolt assembly properly.

3- Fully wind the wire rope of the manual hoisting winch.

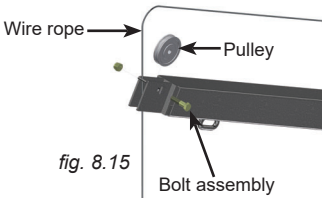


fig. 8.15

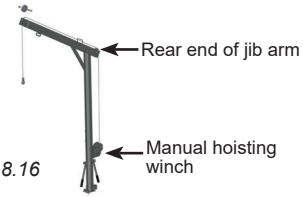


fig. 8.16

4- Set the plates (“1” and “2”, in fig. 8.19) against the end of the jib arm, making sure that the welded stopper is on the appropriate side and that the profiled end of the plate is facing the rear end of the jib arm, as shown in fig. 8.17.

If the side of the jib arm has a stopper, there must be a stopper on the side of the plate that will be set against it, as shown in fig. 8.19, as well as in fig. 8.22 and fig. 8.23, p. 94. It is important to note that the stopper will be located on the right-hand side on some jib arms and on the left-hand side on others. Installation must be adapted accordingly.

fig. 8.18

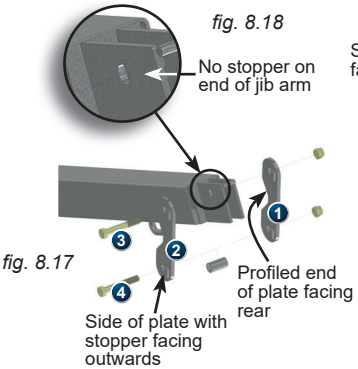


fig. 8.17

fig. 8.20

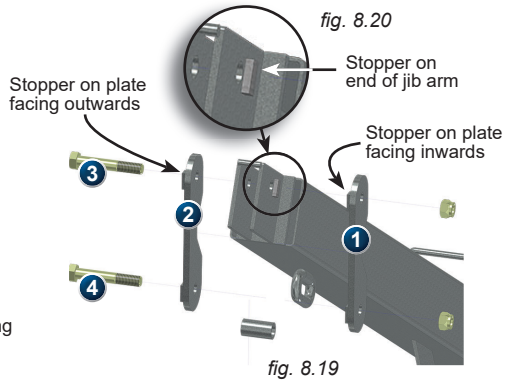


fig. 8.19

Mounting Bracket for Electric Chain Hoist
(optional)

Installation of the mounting bracket (cont'd)

5- Insert the bolt in the top part ("3" in fig. 8.17 and in fig. 8.19, p. 93), making sure the bolt head will be set against and secured by the stopper on the plate. Tighten the nut enough to make sure the assembly is snug against the jib arm. Avoid overtightening to allow the mounting bracket to pivot slightly on the bolt.

6- Insert the bolt in the bottom part of the first plate ("4" in fig. 8.17 and in fig. 8.19, p. 93). Slide the spacer tube over the bolt, then push the bolt through the second plate.

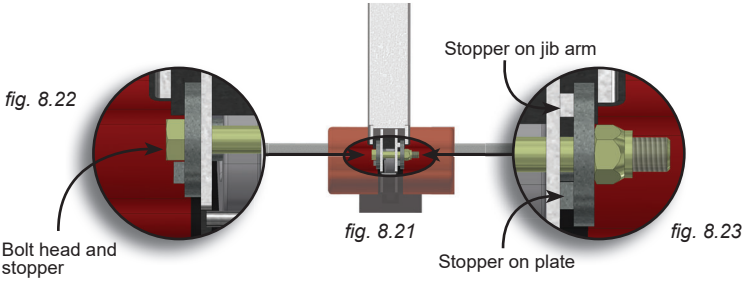


fig. 8.22 *fig. 8.21* *fig. 8.23*

Installation of the electric chain hoist (not provided by Hydro Mobile)

7- Lift the electric chain hoist and hang its hook to the spacer tube on the mounting bracket (fig. 8.24).

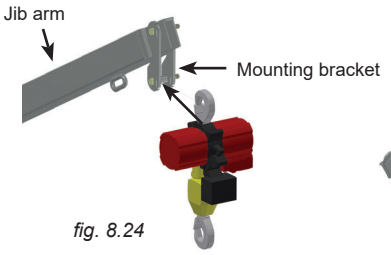


fig. 8.24

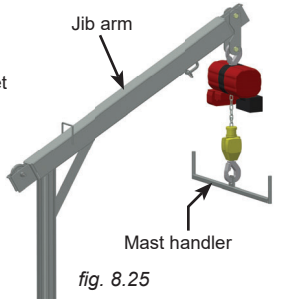


fig. 8.25

8- Connect the electric chain hoist to safe, reliable power source.

9- Install the mast handler (fig. 8.25). The electric chain hoist is now ready to use. It is mandatory to use the device according to the manufacturer's recommendations of use.

10- It is **mandatory** to refer to and comply with the capacities and limitations of the Hydro Mobile jib arm, as well as those of the electric chain hoist, as specified by its manufacturer. The most restrictive of those capacities and limitations will take precedence over the others.

NOTICE

It is **mandatory** to refer to and comply with the capacities and limitations of the Hydro Mobile jib arm, as well as those of the electric chain hoist, as specified by its manufacturer. The most restrictive of those capacities and limitations will take precedence over the others.

Mast Tie Installation/Removal Deck

The installation or removal of mast ties on an S Series modular transport platform setup requires the use of doubled outriggers and planking.

For the initial installation or the removal of mast sections and tie levels, make sure that there is **one 5' (1,5 m) bridge** installed at **each** cantilever end of the motorized unit, as shown in fig. 8.27.

To install additional mast sections and tie levels on a modular transport platform setup with two or more tie levels already in place that has been passed for use, the mast tie installation deck must be installed only on the main frame of the motorized unit, as shown fig. 8.28 and fig. 8.29. It is important to note that these configurations cannot be used for dismantling the installation.

Initial installation or removal of tie levels

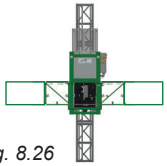


fig. 8.26

One 5' (1,5 m) bridge at **each** cantilever end

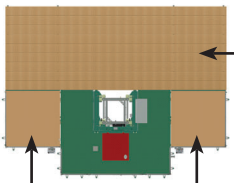


fig. 8.27

Installation on a setup with two or more tie levels in place and passed for use

(not suitable for dismantling operations)

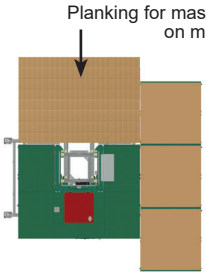


fig. 8.28

5' x 15' (1,5 m x 4,5 m) transport platform

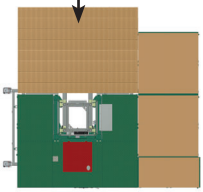


fig. 8.29

5' x 12.5' (1,5 m x 3,8 m) transport platform

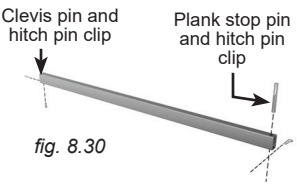
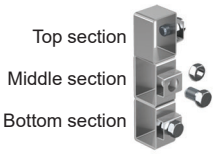


fig. 8.30



Cross box

fig. 8.31

Installation of doubled outriggers

1- Remove the clevis pin and the plank stop pin (fig. 8.30) on one 120" (305 cm) outrigger. Insert the outrigger in the top front outrigger pocket until it is about halfway through ("1" in fig. 8.39, p. 96).

2- Insert the **top section** of a cross box (fig. 8.31) on the rear end of the outrigger ("2" in fig. 8.40, p. 96).

Mast Tie Installation Deck

Installation of doubled outriggers (cont'd)

3- Push the outrigger in the top rear outrigger pocket ("3" in fig. 8.40).

4- Slide the **top section** of a second cross box on the front end of the outrigger ("4" in fig. 8.41).

5- Make sure each cross box is as close as possible to the outrigger pocket. Tighten the bolt on each cross box **by hand** to hold them in place.

Motorized unit

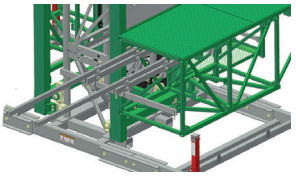


fig. 8.32

5' (1,5 m) bridge

fig. 8.33

fig. 8.34

Components required		
Ref	**Clearance**	**Qty**
1	2 1/2" x 1 1/2" x 1/4" x 120" (6,4 cm x 3,8 cm x 0,6 cm x 305 cm) outrigger	2
2 4 6	cross box	4
5 7	2 1/2" x 1 1/2" x 1/8" x 63" (6,4 cm x 3,8 cm x 0,3 cm x 160 cm) outrigger	3

Note: Cross boxes are shown in blue for illustration purposes only

fig. 8.35

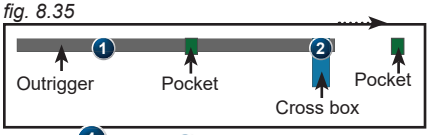
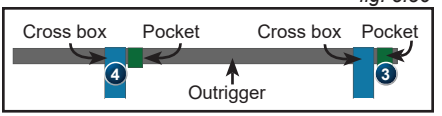


fig. 8.36



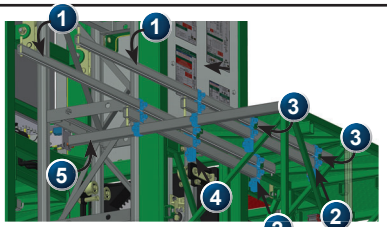


fig. 8.37 Motorized unit

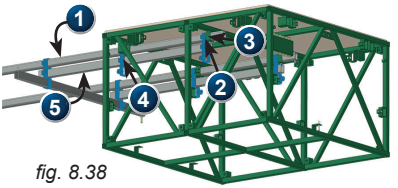


fig. 8.38 5' (1,5 m) bridge

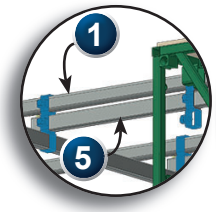


fig. 8.39

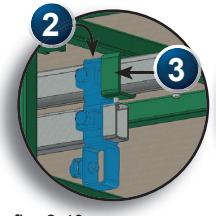


fig. 8.40

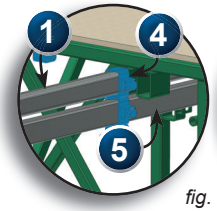


fig. 8.41

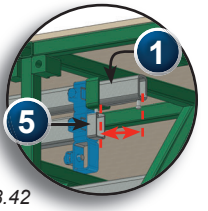


fig. 8.42

3" to 4" (8 cm to 10 cm)

6- Remove the clevis pin and the plank stop pin and insert a 63" (160 cm) outrigger ("5", in fig. 8.41 and in fig. 8.45, p. 97) into the **middle section** of each cross box until its end is pushed in by about 3" to 4" (8 cm to 10 cm) from the end of the top outrigger, as shown in fig. 8.42.

Mast Tie Installation Deck

Installation of doubled outriggers (cont'd)

7- Insert a clevis pin into both outriggers and secure in place with hitch pin clips.

8- Tighten the bolts on all the outrigger pockets and on the top and middle sections of the cross boxes with a torque of 30 lb-ft (41 N-m).

9- Repeat steps 1 through 8 for each doubled outrigger required.

10- Once all required doubled outriggers are installed, slide a transverse outrigger ("7" in fig. 8.45) through the bottom section of the cross boxes on the end of the doubled outriggers ("6" in fig. 8.45).

11- Secure in place by tightening the bolt on the bottom section of the cross boxes with a torque of 30 lb-ft (41 N-m).

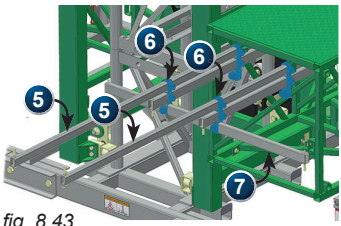


fig. 8.43

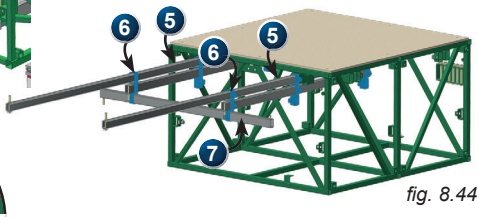


fig. 8.44

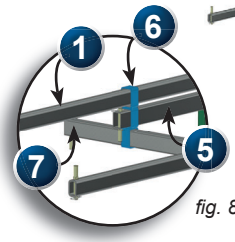


fig. 8.45

Note: Cross boxes are shown in blue for illustration purposes only

12- Install planks on the outriggers. Before raising or lowering the motorized unit, make sure that the planks are removed from the area in front of the mast and that the outriggers clear all obstacles, as shown in fig. 8.46.

Areas (in red) where planks must be removed when raising or lowering unit

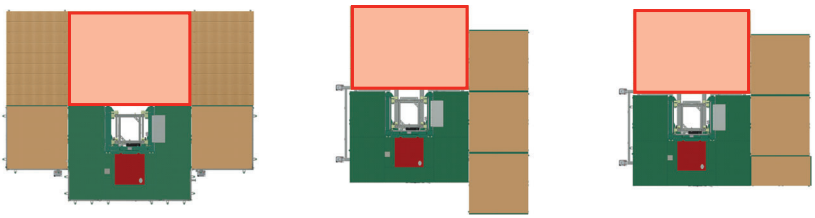


fig. 8.46

CAUTION

Before raising or lowering the motorized unit, **make sure that the planks are removed from the area in front of the mast and the outriggers clear all obstacles**.

Standard Guardrails

In all cases where workers are exposed to fall hazards greater than specified by local regulations, the installation of appropriate guardrails is **mandatory** to ensure safety.

Installation of a standard (low) guardrail

1- Slide a guardrail adapter L bracket (fig. 8.48) in each of the two guardrail pockets at the top of the bridge (see p. 50 of the *Transport Platform Components* section) and secure them with toggle pins.

2- Insert the guardrail legs in the vertical part of the adapter brackets and tighten the bolts on the adapter brackets to secure the guardrail.

3- Install as many guardrails as is required by the setup. Make sure that all guardrails are appropriately locked together (fig. 8.49).

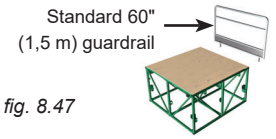


fig. 8.47

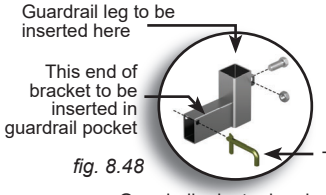


fig. 8.48

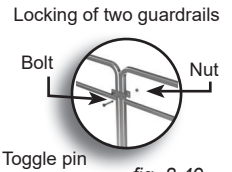


fig. 8.49

Plank-End Guardrail

Plank-end guardrails must be installed at the ends of planking as fall protection.

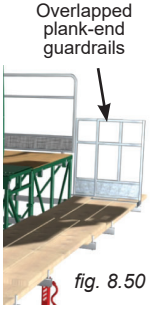


fig. 8.50

Installation

1- Slide the bottom end of the plank-end guardrail over the end of two planks.

2- Drive one or two nails or screws into the planks through the top plate to secure the guardrail in place.

3- In an odd-numbered planking configuration, slide a second plank-end guardrail second guardrail backwards over the end of two planks, overlapping the first one installed. Secure the second guardrail in place as described in step 2.

fig. 8.51

Plank-end guardrail

Universal Plank Safety Support
(optional)

The universal plank safety support is installed at the extremities of planking to prevent planks from lifting, tipping and slipping.

fig. 8.53

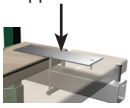


fig. 8.52

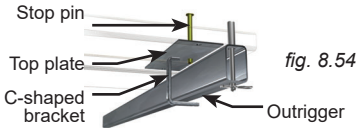


fig. 8.54

Installation

1- Remove the stop pin (fig. 8.54) and slide the plank safety support between two planks.

2- Secure the C-shaped bracket around the outrigger and replace the stop pin.

3- Using screws or nails, secure the top plate of the plank safety support to the planks (fig. 8.54).

Cable Trolley
(optional)

On a setup with a height over 150' (45,7 m), the use of the **optional cable trolley kit** is strongly recommended. The following installation instructions are for an installation on the right side of the mast.

Installation

1- Select the appropriate power cable for the height of the setup. Refer to the *Power Cable Selection Chart* (p. 62) for help with the selection of the power cable. Make sure that the overall length of the cable is sufficient for the installation (height of setup, distance from power source, acceptable overall slack in cable).

2- Remove the three aluminum panels located on the main trolley: one panel located on the side opposite to the control panel, one panel located behind the mast and one under the electric panel.

3- Insert the motorized unit cable support bracket on the bottom horizontal tube of the main trolley that is located on the side opposite to the control panel at a distance of 15.5" (39,4 cm) from the front vertical tube (fig. 8.55). Secure the support in place with a bolt.

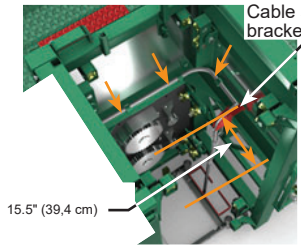


fig. 8.55

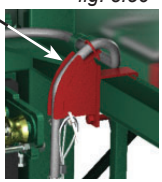


fig. 8.56

Cable through here

Location of open mesh grip

fig. 8.57

Allow some slack in the cable

4- Run the power cable through the bottom of the main trolley and through the cable support. Then run the power cable along the bottom tubes of the main trolley around the back of the unit then to the control panel. Secure the cable to the main trolley tubes. Secure the cable to the cable support using the open mesh grip, making sure the length of the cable is sufficient for a proper hookup to the control panel and that the cable is not too taut.

5- Hook up the power cable to the control panel. **This installation must be performed by a certified electrician**.

6- Allow some slack in the cable behind the mast (fig. 8.57) to be able to adjust the tautness later.

7- Tie the cable to the chain links welded on the tubes of the main trolley. Tie the cable to the cable support bracket using the U-bolt provided.

8- Install the open mesh grip on the cable, making sure that the cable is not taut between the U-bolt and the open mesh grip. Hang the open mesh grip to the cable support bracket installed on the motorized unit.

9- Determine the operational length of the cable ("L1") by calculating the distance between the bottom part of the main trolley and the intended maximum height of the installation.

10- Determine the location for the installation of the second open mesh grip by calculating the distance ("L2") corresponding to the operational length of the cable ("L1") **PLUS** 5' (1,5 m) (fig. 8.58). Install the second open mesh grip at that location on the cable.

11- Hook the free end of the cable ("3", fig. 8.61, p. 100) to an appropriate power source. **This installation must be performed by a certified electrician**.

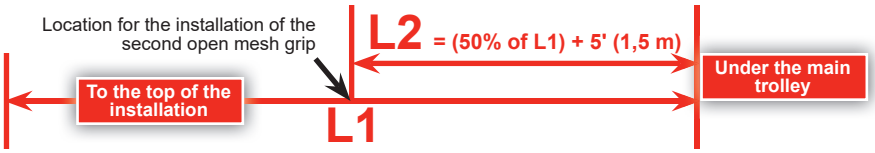


fig. 8.58

Cable Trolley
(optional)

Installation (cont'd)

12- Loop the cable at the location of the second open mesh grip. Insert the loop through the lower part of the main trolley.

13- Temporarily hook the second open mesh grip on the top horizontal tube of the main trolley (fig. 8.59). Some S Series standard motorized units are equipped with a chain link welded to the top horizontal tube (shown in red in fig. 8.59) that can be used to hook the open mesh grip.

14- Make sure that cable segments 1 and 2 (fig. 8.60) are properly aligned for passing through the cable guides that will be installed on the whole length of the mast. Make sure also that segment 3 is properly inserted between the cable guide and the front tube of the mast (fig. 8.62).

15- Install the first cable guide on the middle bar of the second mast section, making sure it is positioned on the structure to be close to the tube located on the front of the mast (fig. 8.64), toward the face of the work. Secure in place with bolt assemblies.

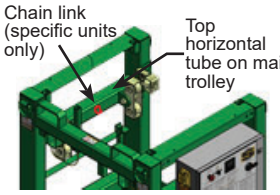


fig. 8.59

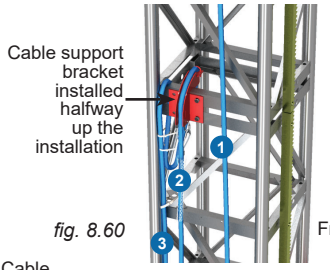


fig. 8.60

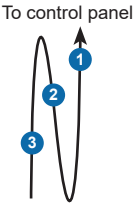


fig. 8.61

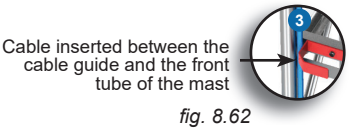


fig. 8.62

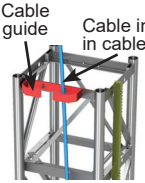


fig. 8.63

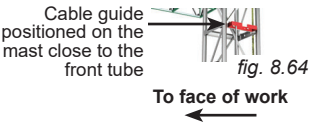


fig. 8.64

16- Raise the motorized unit and install all the required, subsequent cable guides at every tie level, making sure that segments 1 and 2 of the cable (fig. 8.61) are properly inserted in each cable guide.

17- Continue raising the motorized unit until it has reached the junction between two mast sections that is located directly above the halfway mark of the final setup height (determined as "L2" in step 10). For example, if the final setup height will be 300' (91,4 m), the halfway mark will be the junction located directly above the 155' (47,2 m) mark.

18- Secure the halfway cable support bracket over the junction between two mast sections located directly above the halfway mark (fig. 8.60). Secure the support in place with bolt assemblies.

19- Unhook the cable from the horizontal tube on the main trolley (see step 13). Loop the portion of cable coming from the power source ("3", fig. 8.61) inside the mast section.

20- Run a portion of the cable going to the control panel ("2", fig. 8.60) through the support. Secure the cable in place with the U-bolt, making sure to allow some slack in the cable between the U-bolt and the open mesh grip.

21- Lower the unit toward base level. On the way down and at every other mast section, secure the segment of cable coming from the power source ("3", fig. 8.60) to the horizontal bar of the mast section. Make sure to secure the cable close to the tube located on the front of the mast (fig. 8.65, p. 101) so it can be properly inserted in the space between each cable guide and the tube located on the front of the mast.

22- Make sure that the cable segments going to the control panel ("1" and "2", fig. 8.60) is properly inserted in each cable guide (fig. 8.63).

23- Lower the motorized unit until it is about 6' (1,8 m) above base level.

Cable Trolley
(optional)

Installation (cont'd)

24- Remove the bolt assemblies and bushings from the cable trolley (fig. 8.66).

25- Remove the snap ring to take out the wheel shaft and the guide wheel at one end of the cable trolley assembly (fig. 8.66).

26- Align the cable trolley with the mast so the pulley is in line with the power cable.

27- Tilt the assembly toward the inside of the mast so the pulley can be inserted in the opening between the tube on the front of the mast and the diagonal brace inside and the wheel guides can be properly snug against the mast tube (fig. 8.67).

28- Loop cable segments 1 and 2 (fig. 8.60, p. 100) around the pulley and let the cable trolley hang by gravity.

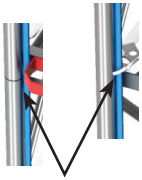


fig. 8.65

Cable is secured to the horizontal bar close to the front tube of the mast section so it can be inserted between the tube and each cable guide

29- Reinstall the bushings and bolt assemblies to hold the cable in place, and reinstall the guide wheel (fig. 8.66).

30- To avoid crushing the cable trolley when bringing the unit down to base level, bolt the stopper (fig. 8.68) under the main trolley, in line with the buffers on the base.

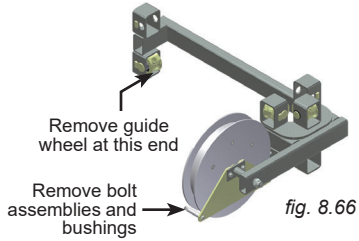
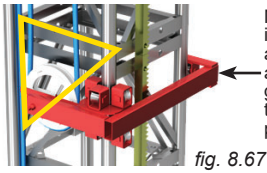


fig. 8.66



Make sure this end is properly snug against the structure and reinstall the guide wheel once the assembly is in place

fig. 8.67

Tilt the assembly to facilitate the insertion of the pulley

31- Adjust the height of the bottom limit trigger to make sure that when the motorized unit stops above the cable trolley when descending, there is at least a 3" (7,6 cm) clearance between the bottom of the stopper and the buffers on the base.

32- If necessary, make the required adjustments if the cable around the cable trolley becomes too loose or too tight.

33- Raise the motorized unit to the top of the installation, making sure along the way that the cable uncoils properly and is passing through each cable guide installed along the mast. On the way up, install all required, subsequent cable guides at each tie level between the halfway mark and the top of the installation.

34- Lower the motorized unit to base level and reinstall the panels removed in step 2.

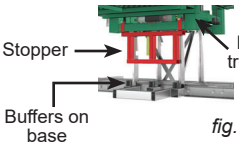


fig. 8.68

Movable Buffer Assembly
(optional)

Base buffers are a safety component designed to stop the downward movement of the platform in the event of a failure to detect both the bottom limit and the bottom final limit or to stop the motorized unit during an emergency descent. The S Series motorized unit is equipped with base buffers. The use of base buffers is mandatory and specified by all applicable Mast Climbing Industry Standards (ANSI, CSA and ISO).

On different job sites, it is frequent that a motorized unit must be stopped at a level higher than the base to avoid possible interference with an obstacle (balconies, curvatures, columns, etc.) or a piece of equipment (such as a sidewalk canopy) located in the area under the unit.

In such conditions, it is mandatory to replace the buffers on the base with a movable buffer assembly in order to stop the downward movement of the platform at the required height in the event of a failure to detect both the bottom limit and the bottom final limit, or to stop the motorized unit during an emergency descent.

The installation of a movable buffer assembly must be performed by a **qualified erector/dismantler**. For the definition of a qualified erector/dismantler, refer to p. 7 of the *Performance and Safety Rules* section.

NOTICE

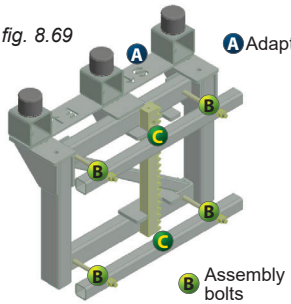
The movable buffer assembly is designed to stop the downward movement of the platform beyond its normal travel limits in the event of a failure to detect both the bottom limit and the bottom final limit or to stop the motorized unit during an emergency descent. A movable buffer assembly must always be used in combination with a trigger for the bottom limit sensor and the bottom final limit switch which must be positioned above the movable buffer assembly.

Positioning the adapter plate

1- It is important to make sure that the position of the adapter plate is appropriate for an S Series motorized unit (fig. 8.71). The arrow on the plate indicates that the “S” position is **toward** the mast (fig. 8.70).

2- To change the position of the adapter plate, remove the three bolts joining the adapter plate to the movable buffer assembly and position the plate appropriately. The positioning block (fig. 8.72) will prevent the alignment of the assembly holes if the plate is not oriented correctly. Rotate the plate by 180 degrees if the position block prevents installation of the adapter plate. Tighten each bolt on the adapter plate with a torque of 60 lb-ft (81 N-m).

fig. 8.69

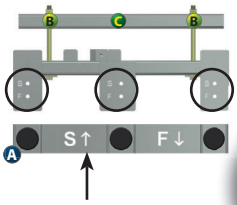


A Adapter plate

B Assembly bolts

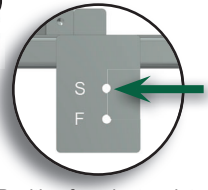
C Support tubes

fig. 8.70



Arrow on plate

fig. 8.71



Position for adapter plate

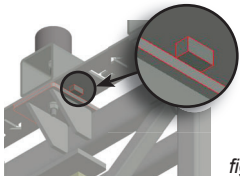


fig. 8.72

Positioning block

Movable Buffer Assembly
(optional)

Installation of the movable buffer assembly

3- Remove the four 5/8"-11 x 10" GR8 assembly bolts (“B” in fig. 8.69, p. 102) and the two support tubes (“C” in fig. 8.69, p. 102).

4- Install the movable buffer assembly at the required height along the mast, using fig. 8.73 as a guide for the best position on a mast section for the installation. It is important to make sure to install the movable buffer assembly in the appropriate position to avoid any damages to the equipment.

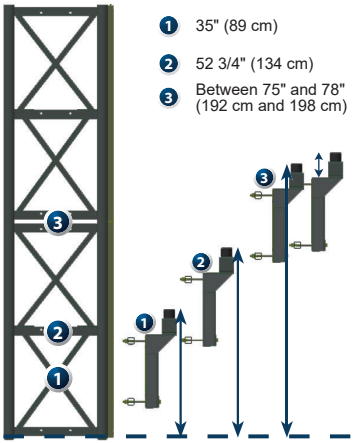


fig. 8.73

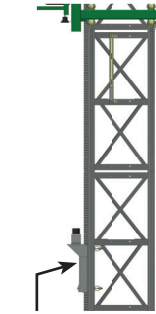


fig. 8.74

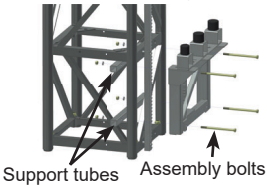


fig. 8.75

5- Secure the movable buffer assembly to the mast section using the two support tubes and four 5/8"-11 x 10" GR8 assembly bolts tightened with a torque of 100 lb-ft (136 N-m).

Positioning the adjustable trigger assembly

6- Remove the two 3/8" x 1" GR5 bolt assemblies and retrieve the bottom limit and bottom final limit adjustable trigger (fig. 8.76) from the half mast section welded on the base.

7- Position the adjustable trigger so that it is located 62" (157,5 cm) above the top of the buffers on the movable buffer assembly, as shown in fig. 8.78, ensuring that the bottom final limit sensor stops the motorized unit when it is at least 1" (2,5 cm) above the buffers.

fig. 8.76
Adjustable trigger assembly

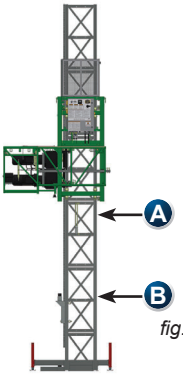
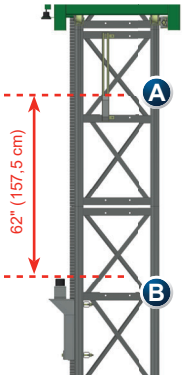


fig. 8.77



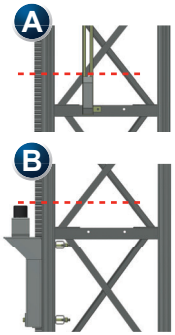


fig. 8.78

Movable Buffer Assembly
(optional)

Contact with the movable buffer assembly in a powered descent

8- The movable buffer assembly acts as a **final mechanical stop** and, as such, becomes a sacrificial part in the event of a **failure to detect the bottom limit and the bottom final limit** while the unit is **traveling down on motor power**, if the operator cannot stop the unit before it comes into contact with the buffer assembly.

As a result, the top part of the movable buffer assembly will bend under the force generated by the downward motion of the motorized unit.

fig. 8.79
Movable buffer assembly after contact with unit in a powered descent

fig. 8.80

fig. 8.81
Rubbers and supports must be replaced

9- The event must be investigated by a **qualified technician** to determine why both the bottom limit and the final bottom limit were not detected properly (failure of a sensor, a switch, etc.).

10- The qualified technician must also inspect the mast to detect any damages to the structure or the rack.

11- The movable assembly must also be inspected by the qualified technician to identify the parts that must be repaired or replaced before the buffer assembly can be used again. In most cases, the adapter plate and the buffers will have to be replaced completely.

Contact with the movable buffer assembly in a gravity-activated descent (emergency descent)

12- During an emergency descent, while the unit is traveling down on gravity, the movable buffer assembly will act as final mechanical stop.

NOTICE

In the event of a failure to detect the bottom final limit and the bottom limit, the movable buffer assembly acts as a final mechanical stop and, in a powered descent, is a sacrificial part. A qualified technician must investigate the event and determine why the bottom limit and the bottom final limit were not detected properly (failure of a sensor, a switch, etc.). The movable buffer assembly must be inspected by a qualified technician to determine if the integrity of the buffer assembly has been compromised by the incident and whether it can be used again or needs to be repaired.

Multiple Mast Handler
(optional)

The use of the multiple mast handler will allow the qualified erector/dismantler to install or remove pre-assembled lengths of mast (also referred to as “sticks”) and reduce the time required to complete the assembly of the mast.

General guidelines

1- The length of pre-assembled mast allowed must be equal to the authorized height of mast in feet (meters) to reach the height at which to install or remove the next tie level, according to the mast tie schedule specific to the installation.

2- For more information about distances between tie levels, refer to the *Mast Tie Schedule* table on p. 81.

Installation of pre-assembled mast sections

1- Pre-assemble a length of mast sections on the ground. Mast sections must be laid down horizontally on the ground. For instructions on the assembly of mast sections, refer to p. 76 of the *Mast and Mast Ties* section. Tighten all bolts with a torque of 150 lb-ft (203 N-m).

Multiple Mast Handler
(optional)

Installation of pre-assembled mast sections (cont'd)

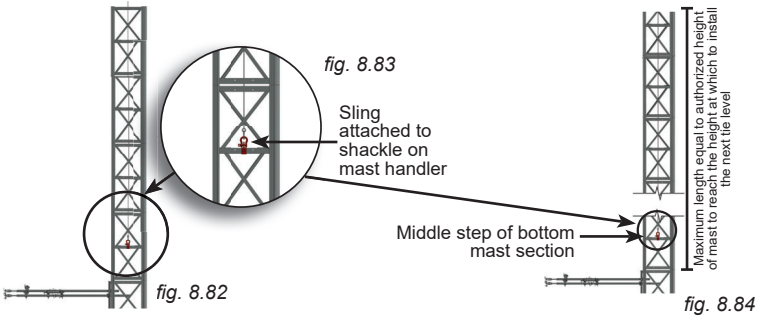
2- Install the multiple mast handler on the middle step of the bottom mast section of the pre-assembled length of mast (fig. 8.84).

3- It is important to consider the weight of the pre-assembled length of mast that must be lifted and to make sure to select a sling, chain or cable that can lift that weight. For example, a pre-assembled 30' (9,1 m) length (6 mast sections) will weigh 1980 lb (898 kg) if mast sections have one rack, or 2190 lb (993 kg) if mast sections have two racks.

4- Insert the sling (or chain or cable) through the pre-assembled length of mast and attach the hook to the shackle on the mast handler.

5- Using a crane (or a forklift), carefully lift and lower the pre-assembled length of mast on top of the last mast section installed.

6- Still holding the length of mast, attach the bottom mast section to the top of the mast section already installed. For instructions on the assembly of mast sections, refer to p. 76 of the *Mast and Mast Ties* section. Tighten all bolts with a torque of 150 lb-ft (203 N-m).



Mast handler shown in red for illustration purposes only

7- Remove the shackle from the mast handler to release the hook and sling. Monitor the release of the sling to avoid potential interferences.

8- Remove the multiple mast handler from the mast section.

9- Raise the motorized unit on the newly added length of mast, making sure that mast bolts are tightened at the proper torque while rising.

10- Install the next tie level. For instructions on how to install a tie level, refer to p. 83 of the *Mast and Mast Ties* section.

11- Repeat steps 1 to 10 for each pre-assembled length of mast to install, as required and allowed.

Removal of assembled lengths of mast sections

1- Bring the motorized unit to where a tie level must be removed. Remove the tie level. For instructions on how to remove a tie level, refer to p. 85 of the *Mast and Mast Ties* section.

2- Lower to the next lower tie level.

3- Install the multiple mast handler on the middle step of the bottom mast section of the assembled length of mast to remove (fig. 8.84).

4- It is important to consider the weight of the assembled length of mast that must be lifted and to make sure to select a sling, chain or cable that can lift that weight. For example, an assembled length of 30' (9,1 m) (6 mast sections) will weigh 1980 lb (898 kg) if mast sections have one rack, or 2190 lb (993 kg) if mast sections have two racks.

5- Insert the sling (or chain or cable) through the assembled length of mast and attach the hook to the shackle on the mast handler.

6- Remove all bolt assemblies joining the lowest mast section of the assembled length to the mast section below. For instructions on the removal of mast sections, refer to p. 77 of the *Mast and Mast Ties* section.

7- Using a crane (or a forklift), carefully lift the assembled length of mast and lower it down in a safe area, away from construction traffic.

8- Remove the multiple mast handler from the mast section.

9- Repeat steps 1 to 8 for each assembled length of mast to remove, as required and allowed.

Transport

Preparation of the motorized unit

1- Dismantle the motorized unit setup following the dismantling guidelines starting on p. 31 of the *Transport Platform System* section.

2- Bring the unit to base level and loosen the bolt of the bottom limit trigger located on the last (bottom) mast section and lower the trigger all the way down.

3- Remove all low guardrails and store them in the appropriate storage location (fig. 9.1 and fig. 9.2). Secure them in place properly.

4- Remove both cantilever bridges.

5- Disconnect the power cable from the motorized unit. **This operation must be carried out by a certified electrician**.

6- Using the emergency descent, lower the motorized unit until it rests on the buffers mounted on the base. Make sure there is no load left on the gears or on the output shaft of the gear box.

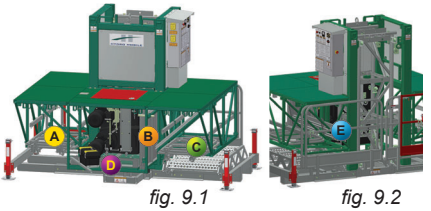


fig. 9.1 *fig. 9.2*

A C 27" (69 cm) and 30" (76 cm) guardrails

D Plank-end guardrails

B Mast guards

E 60" (152 cm) guardrails

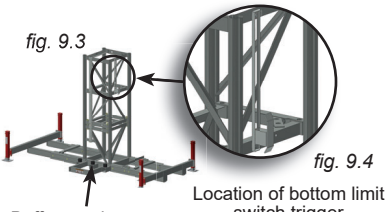


fig. 9.3

Buffers on base

fig. 9.4

Location of bottom limit switch trigger

Lifting and moving of a motorized unit or a cantilever setup

The lift and relocation of an S Series motorized unit or a cantilever setup must be carried out with extreme care, using proper certified lifting equipment.

It is **mandatory** to refer to and comply with the capacities and limitations of the lifting device as specified by the manufacturer. It is important to consider that an S Series motorized unit that must be lifted has a total weight of 7000 lb (3175 kg).

Lifting by the forklift tubes

This method can be used to lift and transport a **motorized unit only**.

1- Prepare the motorized unit as described in the preparation instructions above. Make sure that there is no mast section installed and that all mast guards are removed.

2- Insert the forks in the forklift tubes located at the top of the main frame at the back of the motorized unit (fig. 9.5).

3- Lift and transport the motorized unit over to its destination area.

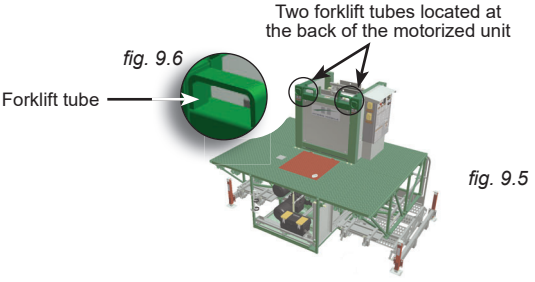


fig. 9.5

CAUTION

It is **mandatory** to refer to and comply with the capacities and limitations of the lifting device as specified by the manufacturer. It is important to consider that an S Series motorized unit that must be lifted has a total weight of 7000 lb (3175 kg).

Transport

Lifting and moving of motorized unit or a setup

Lifting by the D-rings

This method can be used to lift and transport a motorized unit or a cantilever setup with only **one** 5' (1,5 m) bridge installed on **each** side of the mast.

1- Prepare the motorized unit as described in the preparation instructions on p. 108. Make sure that all mast guards are removed.

2- Slip chains or slings through each of the two D-rings located at the top of the main trolley at the back of the motorized unit (fig. 9.7). Secure the chains or slings to the forks of a rough terrain forklift. Make sure to use an appropriate forklift attachment to secure the chains or slings (shown in red in fig. 9.11).

3- Make sure that two workers, wearing proper personal protection (PPE), are standing on the ground using tag lines to help stabilize the structure during the lift, transport and landing of the motorized unit or setup.

4- Lift and transport the motorized unit or setup over to its destination area.

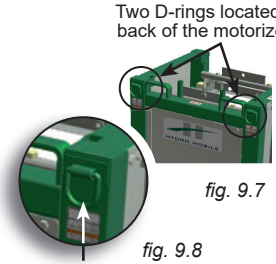


fig. 9.7

fig. 9.8

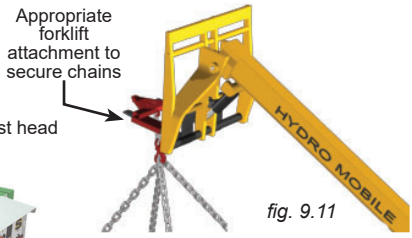


fig. 9.11

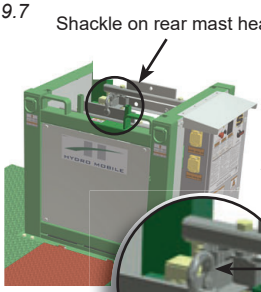


fig. 9.9

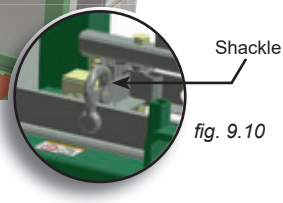


fig. 9.10

Lifting by the rear mast head

This method can be used to lift and transport a motorized unit or a cantilever setup with **only one** 5' (1,5 m) bridge installed on **each side** of the mast.

1- Prepare the motorized unit as described in the preparation instructions on p. 108. Make sure that all the mast guards are removed.

2- Slip a chain or sling through the shackle of the rear mast head located at the back of the motorized unit (fig. 9.10). Secure the chain or sling to the forks of a rough terrain forklift. Make sure to use an appropriate forklift attachment to secure the chain or sling (shown in red in fig. 9.11).

3- Make sure that two workers, wearing proper personal protection (PPE), are standing on the ground using tag lines to help stabilize the structure during the lift, transport and landing of the motorized unit.

4- Lift and transport the motorized unit or setup over its destination area.

Storage

Preparation of the motorized unit for storage

1- Dismantle the motorized unit setup following the dismantling guidelines on p. 31 of the *Transport Platform System* section.

2- Bring the unit to base level and loosen the bolt of the bottom limit trigger located on the last (bottom) mast section (fig. 9.4, p. 106) and lower the trigger all the way down.

3- Disconnect the power cable from the motorized unit. **This operation must be carried out by a certified electrician**.

4- Using the emergency descent, lower the motorized unit until it rests on the buffers mounted on the base. Make sure there is no load left on the gears or on the output shaft of the gear box.

Storage of a bridge

1- Inspect the structure of the bridge, including the inside of the open-end tubes, for any sign of damage or distortion. Clean the bridge and its components thoroughly to limit the effects of any corrosive agent.

2- Bridges must not be stored directly on the ground. Make sure to place sufficient cribbing under the bottom chords to prevent damages to the bottom of the structure.

3- Avoid storing the bridge in a location with direct exposure to aggressive or corrosive materials in the surroundings.

Storage of mast sections

1- Inspect the structure of each mast section, including the inside of the open-end tubes, for any sign of damage or distortion. Clean each mast section and its components thoroughly to limit the effects of any corrosive agent.

2- Mast sections must be stored on a flat surface away from work areas and construction traffic, vertically or horizontally lying on a side which has no rack.

3- Avoid storing mast sections in a location with direct exposure to aggressive or corrosive materials in the surroundings.

Storage of transport platform gates

1- Inspect the structure of each platform gate, including the inside of the open-end tubes, for any sign of damage or distortion. Clean each platform gate and its components thoroughly to limit the effects of any corrosive agent.

2- Platform gates must not be stored directly on the ground. Make sure to place sufficient cribbing under the platform gates to prevent damages to the structure.

3- Avoid storing the platform gates in a location with direct exposure to aggressive or corrosive materials in the surroundings.

Storage of transport platform guardrails and fillers

1- Inspect the structure of each guardrail, including the inside of the open-end tubes, for any sign of damage or distortion. Inspect each filler for any sign of damage or distortion. Clean each guardrail and each filler thoroughly to limit the effects of any corrosive agent.

2- Guardrails and fillers must not be stored directly on the ground. Make sure to place sufficient cribbing under the guardrails to prevent damages to the structure.

3- Avoid storing the guardrails and fillers in a location with direct exposure to aggressive or corrosive materials in the surroundings.

Storage of the motorized unit

1- Follow all steps in the preparation procedure above.

2- Inspect the structure of the motorized unit for any sign of damage or distortion. Clean the motorized unit thoroughly to limit the effects of any corrosive agent.

3- Before storing the motorized unit, make sure to place sufficient cribbing under the base to prevent damages to the bottom of the structure.

4- Choose an appropriate storage location. Avoid storing the motorized unit in an environment where temperatures fluctuate within the range of 32°F and 104°F (0°C and 40°C) and where relative humidity is in excess of 60%.

5- Avoid storing the motorized unit in a location with direct exposure to the sun or UV light and aggressive or corrosive materials in the surroundings.

6- When **not in use for an extended period**, the motorized unit must be **moved up and down** for **10 minutes every 60 days** to allow the oil to warm up while circulating within the gear case. This will ensure a proper internal lubrication and avoid damages to the internal components and to the oil seals on the output shaft.

N

Inspections and Maintenance

Proper maintenance and service will warrant safe, economical, and trouble-free operation of an S Series modular transport platform system. In order to ensure operational safety and avoid failures, the owner must make sure that all the scheduled inspection and maintenance operations have been effectively and timely carried out according to the inspection and maintenance schedules recommended for S Series motorized units and their accessories.

Blank copies of the daily inspection checklist must be available on job sites at all times to be filled out when daily and weekly inspection operations are carried out. Maintenance and inspection logs must be kept on record for warranty and safety purposes.

Copies of all maintenance and inspection checklists can be obtained by contacting the distributor/service center or the Hydro Mobile technical support team or downloaded directly from the Hydro Mobile website at www.hydro-mobile.com.

Daily and Weekly Inspections and Maintenance

Each Hydro Mobile motorized unit and its accessories must be submitted to daily (or before every working shift) and weekly inspections and maintenance operations performed by the qualified user/operator. For more information about qualified operators, refer to p. 7 of the *Performance and Safety Rules* section.

Daily and weekly inspection operations are only necessary when the transport platform and the motorized unit are in use. The owner and/or user is responsible for all inspection and maintenance operations. Before being first used on a job site, the S Series motorized unit and the transport platform components must be inspected effectively and timely, according to the schedules recommended for S Series motorized units and their accessories.

Maintenance and inspection logs must be kept on record for warranty and safety purposes. Blank copies of the daily inspection checklist must be available on job sites at all times to be filled out when daily and weekly inspection operations are carried out. The notes and comments form must be used to indicate any discrepancy or any item found to be not acceptable. Any discrepancy must be reported to the owner/user and the competent person. Appropriate corrective action must be taken immediately before the motorized unit can be used again. Corrective actions must be performed by qualified personnel.

Greasing of gears and rack

A proper and timely greasing of the gears and the racks is critical to guarantee performance and longevity of the Hydro Mobile S Series mast climber system. It is important to understand that not all open gear greases and lubricants offer equal levels of quality and performance. Consequently, only open gear grease approved by the Hydro Mobile Engineering department must be used on Hydro Mobile equipment.

Application frequency must be based on the installation and the cumulative runtime use of the equipment. However, the gears and racks must typically be greased after every **8 to 10 hours of operation** (with unit traveling up and down the mast).

Gears and racks on a typical mast climber with a duty cycle of 25% will require to be greased on a weekly basis.

8 hrs/day * 5 days * 25% duty cycle = 10 hrs

Higher duty cycle operation will require greasing to be more frequent. For example, use of the S Series unit in a transport platform application in 100% duty cycle will **increase greasing requirements** to up to once a day. Grease must be applied to the gears and the rack(s) **at the end of the working shift**. If an **aerosol open gear lubricant** is used, **grease must be allowed to stand for 2-3 hours** before the motorized unit is used again. Use an open gear lubricant recommended by Hydro Mobile.

Applying grease to the rack(s)

1- Make sure that the motorized unit is at the top of the work.

2- Loosen the bolts holding the rear mast guard in place (fig. 9.14, p. 110).

3- Lift the mast guard to remove it (fig. 9.15, p. 110) and store it properly.

NOTICE

It is critical to inspect, clean and grease the gears and rack(s) of a Hydro Mobile S Series transport platform system following the recommended inspection schedules. Failure to clean and grease the gears and rack(s) properly and in a timely fashion can lead to equipment damage and premature wear of the gears, the racks and pinions and cause down time.

Inspections and Maintenance

Greasing of gears and rack(s)

Applying grease to the rack(s) (cont'd)

fig. 9.12

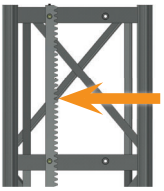


fig. 9.13

Apply grease directly on the rack teeth

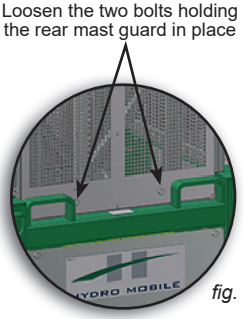
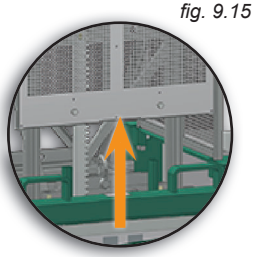


fig. 9.14

fig. 9.15



Lift and remove the mast guard

4- Apply grease directly on the rack teeth, from the top of the mast down to base level, making sure to avoid grease splatters on other components. It is important to use an open gear lubricant recommended by Hydro Mobile (fig. 9.16).

5- Once the grease has been applied on the whole length of the mast, reinstall the mast guard and tighten both bolts to secure it in place.

6- If an **aerosol open gear lubricant** is used, **grease must be allowed to stand 2-3 hours** before the motorized unit is used again.

7- Inspect the racks after each working shift and apply grease, as needed.

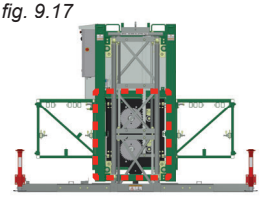
fig. 9.16

Recommended open gear lubricants	
Manufacturer	**Part number**
Prolab	OG-700
Petron Corporation	Gear Shield NC

Applying grease to the gears

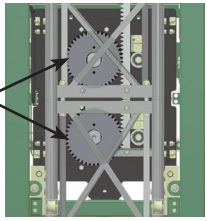
8- Make sure the motorized unit is at base level. Gears can be accessed by the front of the motorized unit, as shown in fig. 9.17.

fig. 9.17



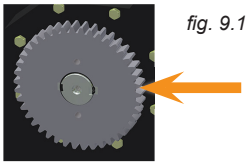
Location of gears on the front of the unit

fig. 9.18



Apply grease on both gears

fig. 9.19



Apply grease directly on the gear teeth

Inspections and Maintenance

Greasing of gears and rack(s)

Applying grease to the gears (cont'd)

9- Inspect each gear and clean any **old grease** expelled out of the gear meshing. Old grease must be **cleaned off** on a regular basis .

10- Apply grease directly on the teeth of each gear (fig. 9.19, p. 110), making sure to avoid splatters on other components. It is important to use an open gear lubricant recommended by Hydro Mobile (fig. 9.16, p. 110).

Frequent Inspections and Maintenance

Frequent inspections must be performed by a qualified technician. For more information about qualified technicians, refer to p. 7 of the *Performance and Safety Rules* section.

Each Hydro Mobile motorized unit must be submitted to a frequent inspection performed every three months by a qualified technician.

Maintenance and inspection logs must be kept on record for warranty and safety purposes. Blank copies of the frequent inspection checklist must be filled out when frequent inspection operations are carried out. The notes and comments form must be used to indicate any discrepancy or any item found to be not acceptable. Any discrepancy must be reported to the owner/user and the competent person. Appropriate corrective action must be taken immediately. Corrective actions must be performed by a qualified technician.

All inspection and maintenance steps included in the daily inspection checklist must be performed before the frequent inspection and maintenance steps.

It is recommended to use replacement parts manufactured by or recommended by Hydro Mobile. The use of substitute parts could not only void the warranty covering this motorized unit and its components but cause serious damages that could lead to injury or death. It is recommended to replenish and grease components only with fluids and lubricants recommended by Hydro Mobile.

Annual Inspections and Maintenance

Annual inspections must be performed by a qualified technician. For more information about qualified technicians, refer to p. 7 of the *Performance and Safety Rules* section.

Each Hydro Mobile motorized unit must be submitted to an annual inspection performed by a qualified technician. This annual inspection must be carried out no later than 13 months after the previous annual inspection.

Maintenance and inspection logs must be kept on record for warranty and safety purposes. Blank copies of the annual inspection checklist must be filled out when annual inspection operations are carried out. The notes and comments form must be used to indicate any discrepancy or any item found to be not acceptable. Any discrepancy must be reported to the owner/user and the competent person. Appropriate corrective action must be taken immediately before the motorized unit can be used again. Corrective actions must be performed by a qualified technician.

It is recommended to use replacement parts manufactured by or recommended by Hydro Mobile. The use of substitute parts could not only void the warranty covering this motorized unit and its components but cause serious damages that could lead to injury or death. It is recommended to replenish and grease components only with fluids and lubricants recommended by Hydro Mobile.

WARNING

Any equipment, accessory or component found or suspected to be non compliant with inspection requirements must not be used before it has been duly inspected and deemed compliant. Any discrepancy must be reported to the owner/user and appropriate corrective action must be taken immediately before the motorized unit can be used again. Corrective actions must be performed by a qualified technician.

Inspections and Maintenance

Copies of inspection and maintenance checklists shown below can be obtained by contacting the distributor/service center or the Hydro Mobile technical support team or downloaded directly from the Hydro Mobile website at www.hydro-mobile.com.

Daily inspection checklist

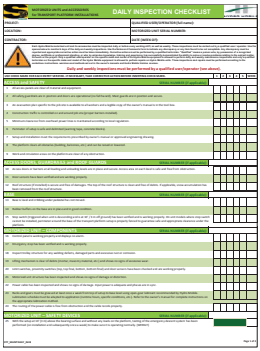

DAILY INSPECTION CHECKLIST

fig. 9.20

Frequent inspection checklist

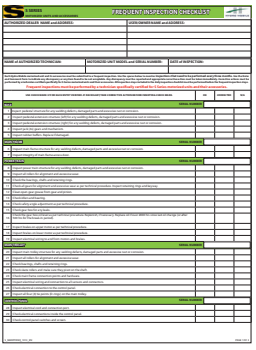

FREQUENT INSPECTION CHECKLIST

fig. 9.21

Annual inspection checklist

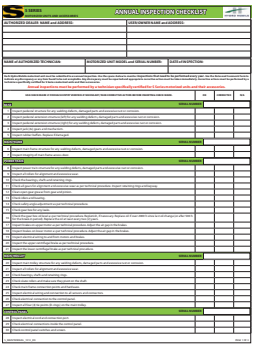

ANNUAL INSPECTION CHECKLIST

fig. 9.22

Copies of the job survey checklist and the handover checklist shown below can be obtained by contacting the distributor/service center or the Hydro Mobile technical support team or downloaded directly from the Hydro Mobile website at www.hydro-mobile.com.

Job Survey – Job Hazard Analysis

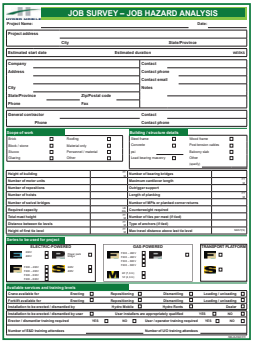

JOB SURVEY – JOB HAZARD ANALYSIS

fig. 9.23

Installation Handover Sheet

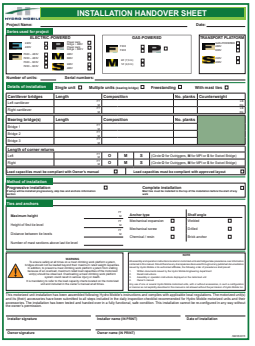

INSTALLATION HANDOVER SHEET

fig. 9.24