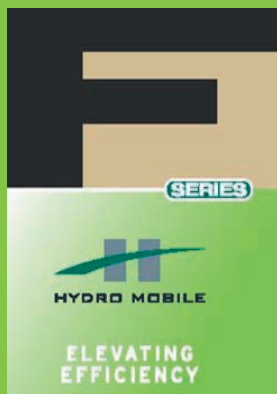


# Operator's Manual

for models F100, F200 and F300



Call us for information:  
1-888-484-9376 (US)  
(toll free in the United States)  
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#### NOTE

All assembly and operation instructions located on motorized units and bridges 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. Operator's manual
5. Any other document not specifically included in the list above

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 this manual is not recommended without the prior written permission of Hydro Mobile Inc.

REVISION LIST	
Date	Description
January 2007 v1.0	First edition of Operator's manual
March 2007 v1.1	Modification to index (text); modification to plank measurements (cribbing); modification to plank measurements (ground bearing); updated hydraulic diagrams for F100, F200 and F300 units
April 2007 v 1.2	Updated hydraulic diagrams for F100, F200 and F300 units; updates to unit specifications; updates to forward/back extension texts; addition of plank-end guardrail as standard component



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GENERAL INFORMATION			
Model (check one)	<input type="checkbox"/>	F100	38" (11.6 m)/min motorized unit
	<input type="checkbox"/>	F200	19" (5.8 m)/min motorized unit
	<input type="checkbox"/>	F300	38" (11.6 m)/min motorized unit
Motorized unit serial number			
Manufacturing date			

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## Introduction

Dear owner or user:

Thank you for investing in a Hydro Mobile F Series mast climbing work platform system (models F100, F200 and F300). The design of these new motorized unit models 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 a competent person and backup competent person assemble, operate, dismantle and move your mast climbing work platform system. These competent persons will be required to read this operator's manual and assimilate the information contained herein. Failure to do so could lead to serious injury and/or equipment damage.

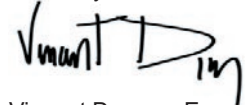
This motorized unit was designed in accordance with the following standards: US ANSI A92.9-1993, ISO 16369 and EN 1495, 98/37/CE "directive machine" and 89/336/CEE "directive CEM". Furthermore, this motorized unit and its operator's manual comply with US ANSI A92.9-1993 standards, Federal Occupational Safety and Health Administration Standards OSHA 29CFR1926 subpart L, as well as applicable State and local regulation; with ISO 16369 as well as local regulation applicable in Canada; and with EN 1495, 98/37/CE "directive machine", 89/336/CEE "directive CEM" or ISO 16369, as well as local regulation applicable in Europe.

To maximize the life expectancy of your equipment and to enjoy years of trouble free operation, we recommend that this Hydro Mobile system be serviced according to maintenance schedules and recommendations provided in this manual. It is also advised to refer to the Honda user's manual included with the motorized unit.

Should you have any questions or concerns, please contact the nearest authorized distributor or Hydro Mobile directly at 888-484-9376 (in the United States), (450) 589-8100 (in Canada) or +033.6.30.63.14.56 (in Europe). You can also visit our Web site at [www.hydro-mobile.com](http://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, Eng.  
President

### NOTE

Items depicted in illustrations throughout this manual may differ from actual products. Items referred to as **wall ties** are the equivalent of the industry standard's **mast ties** and are subject to the same rules and regulations.

## Warranty

Hydro Mobile Inc., herein referred to as Hydro Mobile, warrants its new products to be free from defects in material or workmanship for a period of one year after the date of delivery to the first user or a maximum of 18 months after date of delivery to its authorized distributor.

Hydro Mobile's obligation and liability under this warranty are expressly limited to repairing or replacing with re-manufactured or new, at Hydro Mobile's option, any parts which appear to have been defective in material or workmanship. Such parts shall be provided at no cost to the distributor or end user, FCA distributor's yard or job site, at Hydro Mobile's option.

Hydro Mobile shall pay, to the extent established by its applicable service policy in effect at the time of delivery, the cost to install any repaired or replacement part provided under this warranty. The cost of any such work will only be paid by Hydro Mobile if a written authorization has been granted prior to its beginning.

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, express or implied, and offers no warranty of merchantability or fitness for any particular purpose.

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. If requested by Hydro Mobile, transportation charges for products or parts to be returned for warranty claim shall be prepaid by the distributor or end user.

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 this manual is not recommended without the prior written permission of Hydro Mobile Inc.

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 with 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, shall void this warranty.

Sincerely,



Vincent Dequoy, Eng.  
President



### Performance and Safety Rules

**SAFETY** comes first. To ensure user safety, always have a competent person and backup competent person assemble, operate, dismantle and move this mast climbing work platform system. A competent person is defined as one having the:

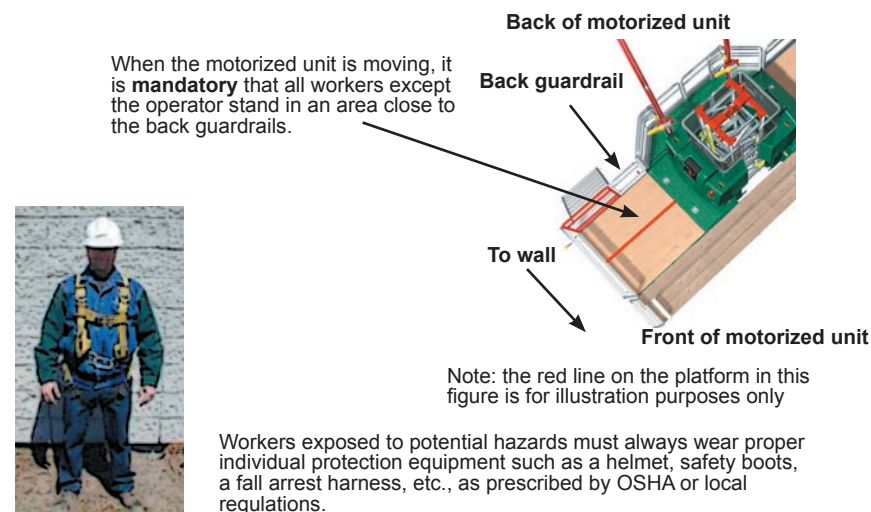
- 1- Capability of identifying existing and predictable hazards;
- 2- Authority to take prompt corrective action;
- 3- Training and knowledge to assemble, operate, dismantle and move this system;
- 4- Operator's manual information on hand at all times;
- 5- Experience (on the job) to assemble, operate, dismantle and move this system.

### Operating instructions

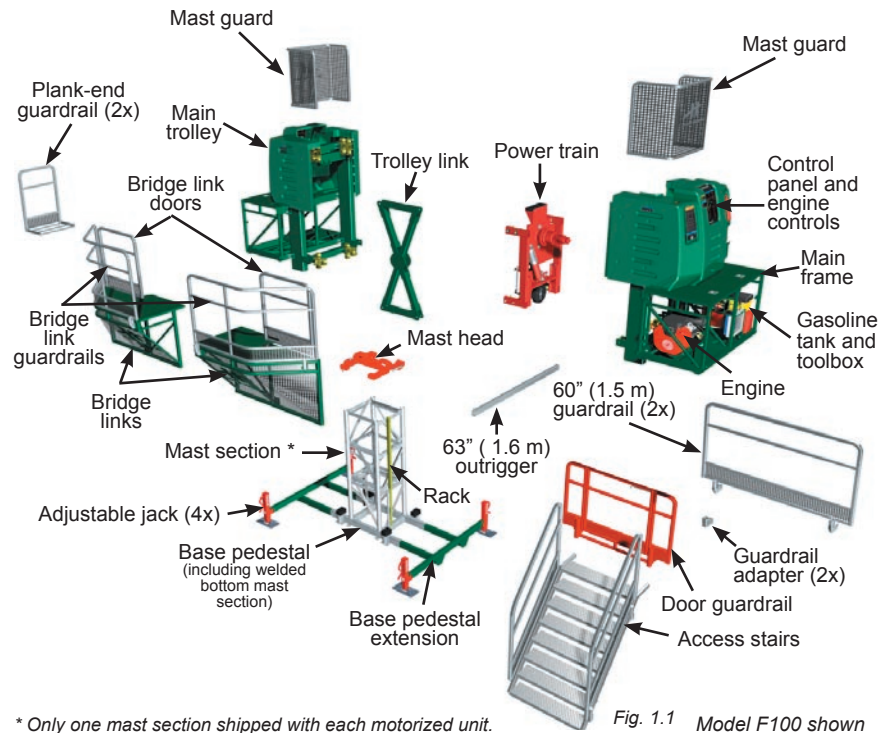
- 1- Prepare a layout plan showing how the mast climbing work platform system [motorized unit(s), bridges, extensions] will be positioned near structures or walls to be erected. On long walls, separate mast climber sections to allow for flexibility. Position motorized units to provide proper anchoring points for masts.
- 2- Establish the distance between the mast climbing work platform system and the structure or wall, taking into account the length of plank outriggers [5 or 7 ft (1.5 m or 2.1 m)], as well as curvatures, balconies, columns, trees, telephone wires, electrical lines, etc.
- 3- Refer to and follow regulations governing distances between the mast climbing work platform system and electrical lines.
- 4- Make sure the ground or support surface capacity meets with values included in the *Minimum Ground Bearing Capacities* table herein (fig. 1.17, p. 13). Soil compacting, cribbing or shoring can increase bearing capacity. The **jacks on the base pedestal extension** are designed to level the motorized unit and **should not be used to support the load nor the motorized unit**. Contact a licensed professional engineer for assistance.
- 5- Never modify the mast climbing work platform system or use substitute factory parts. This could adversely affect worker safety, unit performance and void the warranty. In addition, this could lead to serious injury or death.
- 6- Never use the motorized unit in an enclosed space due to carbon monoxide emanations or in a place where explosives are stored. It is also recommended not to smoke on the platform.
- 7- Characteristics per plank: planks species measuring 2" x 10" or 12" (5 cm x 25 cm or 30 cm) must resist a load of 265 lb (120 kg) at 4' (1.2 m) of an 8' (2.4 m) simple span.
- 8- **IMPORTANT:** It is strongly recommended not to use equipment such as Bobcats, jack-hammers, backhoes, etc., on Hydro Mobile platforms.
- 9- Workers exposed to potential hazards must always wear proper individual protection equipment such as a helmet, safety boots, a fall arrest harness, etc., as prescribed by OSHA or local regulations. In all cases where workers are exposed to fall hazards greater than specified by OSHA or local regulations, the installation of guardrails or face guardrails is **mandatory**.
- 10- Unless authorized by Hydro Mobile prior to installation, the platform should only be used on a mast whose height does not exceed 500' (152 m). For any configuration other than those described in this operator's manual, contact the distributor or the Hydro Mobile technical support team.
- 11- Rely on a licensed engineer for help on special jobs and to approve plans if required by local regulation.
- 12- To ensure work efficiency, maintain an adequate equipment and parts inventory on the job site. Keep equipment in good condition. Refer to maintenance checklists in this manual.

### Performance and Safety Rules (cont'd)

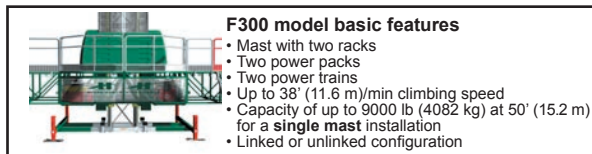
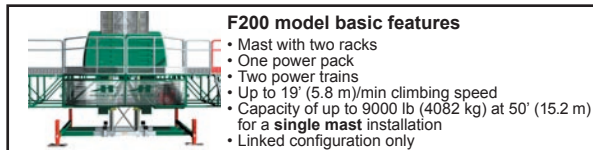
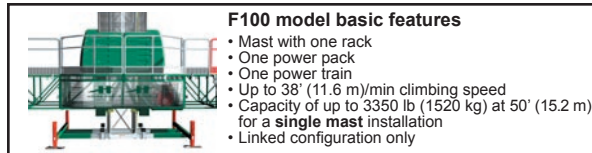
- 13- After installation, mark off limit areas of the setup using fencing, barriers, warning tape and note emergency phone numbers (fire and police dept.) for quick reference. **Prepare an emergency evacuation plan that is specific to the job site and is in accordance with OSHA and local regulations.**
- 14- **Never load bridges or motorized units beyond their rated capacities.** Overloading may cause motorized units to bind and bridges to warp or fall, leading to serious injury or death.
- 15- Contact the distributor or Hydro Mobile for service, repair or technical advice. Refer to equipment type and serial number when calling.
- 16- Each person should access the platform by the access stairs, a staircase or through an opening in the building.
- 17- The use of appropriate fall protection equipment is **mandatory** when modifying plank configuration. Failure to use fall protection equipment can expose the user to serious injury or death.
- 18- When the motorized unit is moving, it is **mandatory** that all workers except the operator stand in an area close to the back guardrails, as illustrated below.
- 19- In the event of an anomaly which could compromise security, immobilize the unit and inform the person in charge.
- 20- It is strongly recommended not to touch any of the moving parts on the motorized unit when it is in use.
- 21- It is advised to close all access doors on the motorized unit when they are not in use.
- 22- All motorized unit operations must be carried out at all times by at least two competent persons. The motorized unit should never be operated by a single person.
- 23- The motorized unit must not be used or operated during an electrical thunderstorm.
- 24- Wind speeds must not exceed 28 mi/h (46 km/h) during the erection and dismantlement of a motorized unit setup (including the base pedestal, the base pedestal extension, the bridges, the masts, the wall ties and all the other components). The motorized unit setup must not be exposed to wind speeds exceeding 35 mi/h (56 km/h) when in operation. Wind speeds must not exceed 102 mi/h (165 km/h) when the motorized unit setup is out of service.



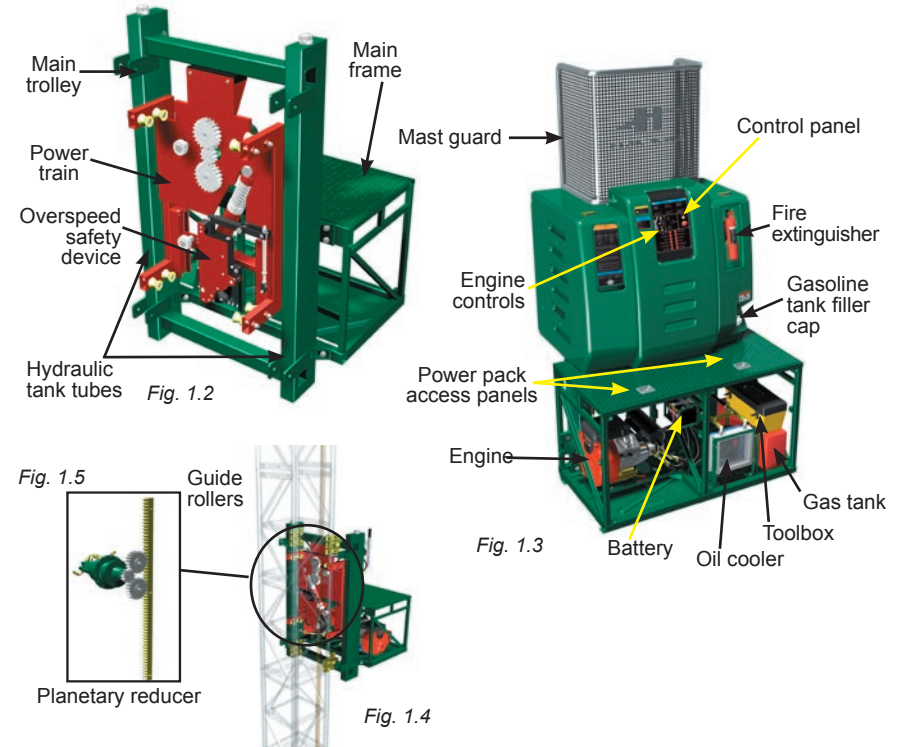
## Motorized Unit Overview



The mast configuration represented in the above illustration is for informational purposes only and should not be reproduced without appropriate cribbing under the base pedestal. Models F100, F200, F300 of the Hydro Mobile F Series come equipped with the components shown in the above illustration, with features specific to each model, as described below. Note: Items depicted in illustrations may differ from actual products.



## Motorized Unit Overview (cont'd)



List of Components Included with Shipped Unit	
Quantity	Component
1	F Series motorized unit [model F100, F200 or F300]
1	Operator's manual
1	base pedestal (including welded bottom mast section)
2	base pedestal extensions (1 x left and 1 x right)
1	mast section
2	mast guards
1	mast head
2	bridge link guardrails (1 x left and 1 x right)
2	bridge link doors (model F300 only)
1	communication cable (model F300 only) (A0500603-0021)
2	quick connect hoses (for the brake) (1 x left and 1 x right – model F300 only) (A0640001-0041 and A0640001-0042)
1	60" (1.5 m) guardrail
2	guardrail adapter L brackets
1	door guardrail
2	plank-end guardrails
1	access stairs
6	63" (1.6 m) outriggers
<b>Note</b> The list of components included with each motorized unit shipped may change without notice.	

Fig. 1.6

## Motorized Unit Specifications

General Specifications		
<b>Platform dimensions (transport)</b>		On pedestal base, with extensions 102" x 147" x 102" (W x L x H) (259 cm x 373 cm x 259 cm)
<b>Drive unit dimensions</b>		With bridge link 93" x 122" x 102" (W x L x H) (236 cm x 310 cm x 259 cm)  Without bridge link 62" x 122" x 102" (W x L x H) (157 cm x 310 cm x 259 cm)
<b>Drive system</b>		Rack and pinion drive
<b>Min. / max. platform length</b>	Single mast installation	10' / 50' (3 m / 15.2 m)
	Twin mast installation	35' / 115' (10.6 m / 35 m)
<b>Maximum height</b>		Up to 500' (152.4 m) without prior authorization from Hydro Mobile
<b>Tie distance</b>		Up to a maximum of 45' (13.7 m)
<b>Free standing height (on mobile chassis base only) *</b>	Single mast installation	40' (12.2 m)
	Twin mast installation	40' (12.2 m)
<b>Maximum mast head lifting capacity</b>		Motorized unit (on base pedestal) Max setup width of 50' (15.2 m) or 8 x 60" (1.5 m) bridges Max setup height of 18' (5.5 m) or 2 masts
<b>Safety devices</b>	Emergency descent	Gravity-activated manual descent system
	Overspeed safety device	Gravity-activated

\* The mobile chassis base is not yet available

Fig. 1.7

Specific Features				
		F100	F200	F300
<b>Platform weight</b>		On base pedestal 6050 lb (2744 kg)	On base pedestal 6700 lb (3030 kg)	On base pedestal 8400 lb (3810 kg)
<b>Maximum load capacity</b>	Single mast installation	3350 lb at 50' (1520 kg at 15.2 m)	9000 lb at 50' (4082 kg at 15.2 m)	9000 lb at 50' (4082 kg at 15.2 m)
	Twin mast installation	5000 lb at 115' (2268 kg at 35 m)	15,500 lb at 115' (7031 kg at 35 m)	15,500 lb at 115' (7031 kg at 35 m)
<b>Vertical travel speed</b>		Up to 38' (11.6 m) per minute (gasoline engine only)	Up to 19' (5.8 m) per minute (gasoline engine only)	Up to 38' (11.6 m) per minute (gasoline engine only)
<b>Mast section</b>		<b>1 rack</b> 32" x 32" x 60" (81.3 cm x 81.3 cm x 152.4 cm) 330 lb (150 kg) per section	<b>2 racks</b> 32" x 32" x 60" (81.3 cm x 81.3 cm x 152.4 cm) 365 lb (166 kg) per section	<b>2 racks</b> 32" x 32" x 60" (81.3 cm x 81.3 cm x 152.4 cm) 365 lb (166 kg) per section

Fig. 1.8

Fig. 1.9

Engine Specifications	
<b>Model</b>	Honda GX670
<b>Rated power</b>	24 HP @ 3500 rpm
<b>Fuel consumption</b>	0.59 lb/hph (360g/kWh, 265 g/PSH)
<b>Spark plug</b>	ZGR5A (NGK), J16CR-U (DENSO)
<b>Oil type</b>	SAE 10W-30
<b>Gasoline tank capacity</b>	10 US gal (38 l)
<b>Oil capacity</b>	1.48 US qt (1.40 l)
<b>Electrical power supply</b>	12 VDC - 20 ampere-hour
<b>Battery</b>	12 V
For any other information regarding the use and the maintenance of Honda engines, refer to the Honda user's manual	

## Motorized Unit Specifications (cont'd)

Hydraulic Specifications	
Component	Specifications
Double gear pump	2 x 7.25 US GPM (27.44 l/min)
Planetary reducer gear oil	Sunoco Challenge GBO 220 (product # 6048-020) <b>Warning: do not use in planetary reducer brake</b>
Planetary reducer brake oil	Tribospec TDH-W 32 (product # 6435-020) <b>Warning: do not use in planetary reducer gear box</b>
Hydraulic tank capacity	18 US gal (68.2 l) models F100 and F200; 36 US gal (136.2 l) model F300
Hydraulic oil	Shell Naturelle HF-M biodegradable product code 407-214
Oil filter	Mfr. model no. CSG-100-P10-A)

Fig. 1.10

Weight of Components		
Product code	Description	Weight
20023401-0-10000-2	Mast assembly (1 rack)	330 lb (150 kg)
20023401-0-00000-2	Mast assembly (2 racks)	365 lb (166 kg)
21023000-1-10000-2	Mast guard (LEFT)	30 lb (14 kg)
21023100-1-10000-2	Mast guard (RIGHT)	30 lb (14 kg)
21035200-0-00000-1	Hydraulic main trolley assembly	1000 lb (455 kg)
21035300-0-00000-1	Main trolley assembly	830 lb (377 kg)
21035000-0-00000-1	Power train assembly	700 lb (318 kg)
21000000-0-01000-1	Hydraulic main frame w/ power pack assembly	700 lb (318 kg)
21000100-0-00000-1	Main frame assembly	455 lb (207 kg)
21035500-1-10000-1	Trolley link	100 lb (45 kg)
21003000-0-00000-1	Bridge link assembly (LEFT)	190 lb (86 kg)
21003100-0-00000-1	Bridge link assembly (RIGHT)	190 lb (86 kg)
10002609-1-10000-2	Plank-end guardrail	27 lb (12 kg)
A0540000-0003	Control panel	40 lb (18 kg)
21047000-0-00000-0	Plastic hood assembly – RIGHT FRONT (all models); LEFT REAR (model F300)	Coming soon
21047100-0-00000-0	Plastic hood assembly – LEFT REAR (models F100 and F200)	Coming soon
21047200-0-00000-0	Plastic hood assembly – RIGHT CENTER (all models); LEFT CENTER (model F300)	Coming soon
21047300-0-00000-0	Plastic hood assembly – RIGHT REAR (all models); LEFT FRONT (all models)	Coming soon
A0950000-0002	Plastic hood assembly – LEFT CENTER (models F100 and F200)	Coming soon
21001000-0-01000-2	Base pedestal assembly (models F200 and F300)	250 lb (113 kg)
21001000-0-11000-2	Base pedestal assembly (model F100)	192 lb (87 kg)
20001705-0-00000-1	Base pedestal extension assembly (LEFT – with mast handler) *	240 lb (100 kg)
20001705-0-01000-1	Base pedestal extension assembly (RIGHT) *	231 lb (105 kg)
21001000-0-10000-2	Base pedestal with extension assembly (models F200 and F300)	721 lb (328 kg)
21001000-0-00000-2	Base pedestal with extension assembly (model F100)	663 lb (301 kg)
20003C04-K-02000-1	30" (76 cm) bridge kit (w/ guardrail) (models F100, F200 and F300)	190 lb (86 kg)
20003D03-K-02000-1	60" (1.5 m) bridge kit (w/ guardrail) (models F100, F200 and F300)	380 lb (173 kg)

\* Left and right base pedestal extension assemblies sold together

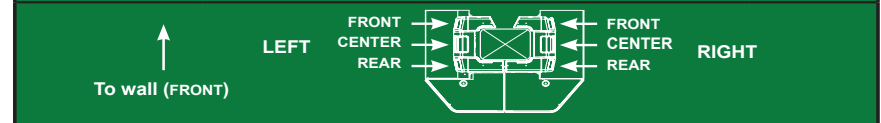


Fig. 1.11

Fig. 1.12

Operation Specifications	
<b>Wind exposure</b>	
	<b>Maximum wind speed allowed</b>
During operation	35 mi/h (56 km/h)
During erecting and dismantling	28 mi/h (46 km/h)
When unit is out of service	102 mi/h (165 km/h)
* Unless authorized by Hydro Mobile prior to installation, the platform should only be used on a mast whose height does not exceed 500' (152 m)	
<b>Noise exposure</b>	
Standard noise level (DB-A / 7m) @ 3600 rpm =	
	83, 76(SS*)      *SS: Super silent



## Dimensions of the Motorized Unit

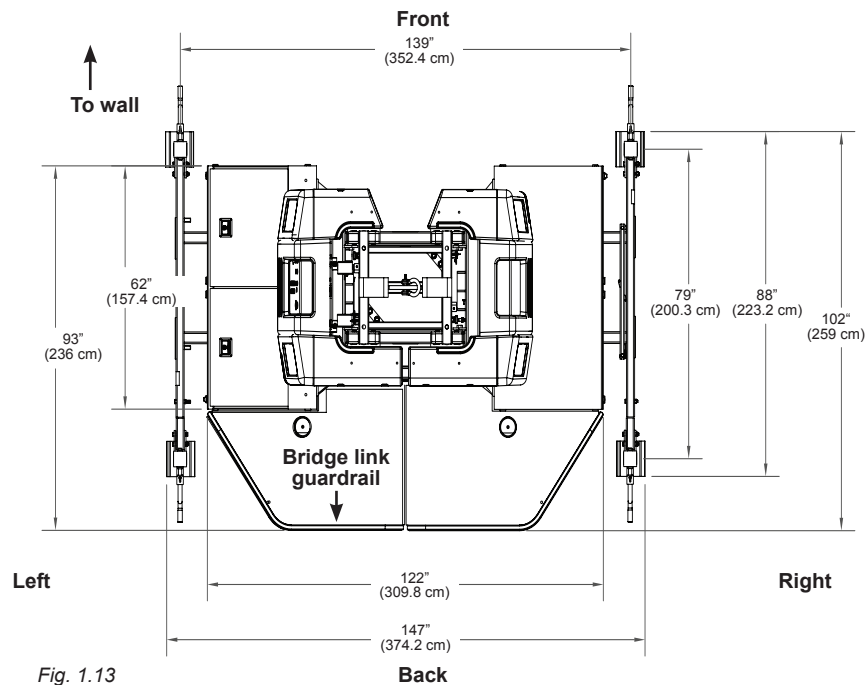


Fig. 1.13

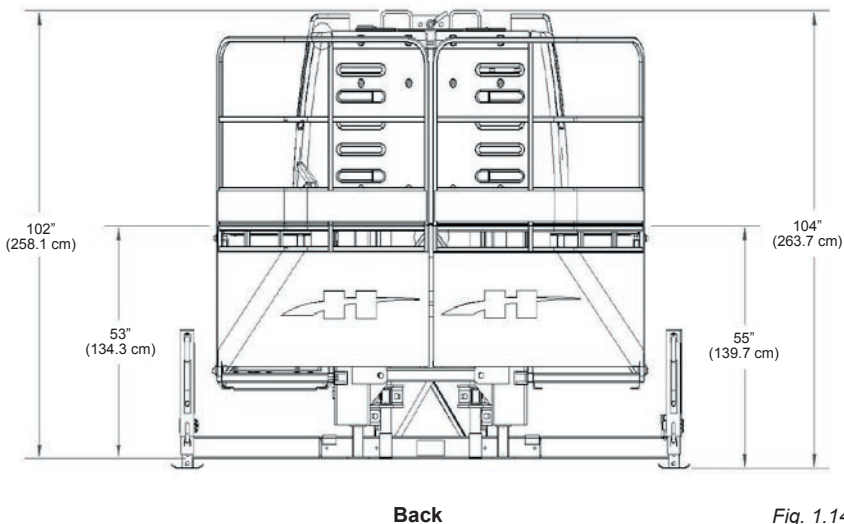


Fig. 1.14

## Positioning the Motorized Unit

## Base pedestal and cribbing

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 pedestal to distribute the load. The plywood and planks used as cribbing should be secured together to prevent slipping, leaving 1/2" (1.3 cm) of space between planks.

Fig. 1.15

Suggested Cribbing				
		3' x 3' x 4 1/2" (0.9 m x 0.9 m x 1.4 m)	4' x 4' x 6 1/2" (1.2 m x 1.2 m x 2 m)	5' x 5' x 8 1/2" (1.5 m x 1.5 m x 2.6 m)
①	Plywood 1/2" (1.3 cm)	3	4	5
	2" x 6" x 36" (5 cm x 15 cm x 91 cm)	12		
②	2" x 6" x 48" (5 cm x 15 cm x 122 cm)		18	
	2" x 6" x 60" (5 cm x 15 cm x 153 cm)			24

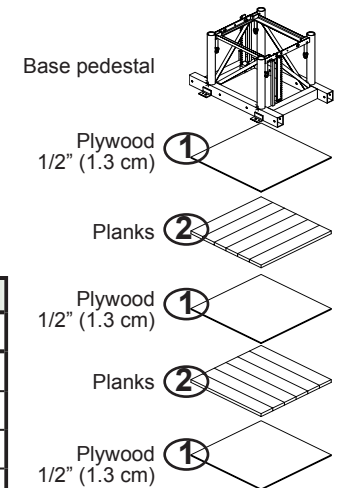


Fig. 1.16

## Minimum Ground Bearing Capacities

Minimum Ground Bearing Capacities						
Height		Reaction		Pressure (psi)		
ft	m	lb	kg	3'x3'x4 1/2" (0.9 m x 0.9 m x 1.4 m)	4'x4'x 6 1/2" (1.2 m x 1.2 m x 2 m)	5'x5'x8 1/2" (1.5 m x 1.5 m x 2.6 m)
0	0	18 000	8165	14	8	6
50	15	22 000	9979	17	10	8
100	30	26 000	11 793	20	11	9
150	46	30 000	13 608	23	13	11
200	61	34 000	15 422	26	15	12
250	76	38 000	17 237	29	16	14
300	91	42 000	19 051	32	18	15
350	107	46 000	20 865	35	20	16
400	122	50 000	22 680	39	22	18
450	137	54 000	24 494	42	23	19
500	152	58 000	26 308	45	25	21

Fig. 1.17



## WARNING

The bearing capacity must be verified by a professional engineer. Should the actual bearing capacity be inferior to the values in the *Minimum Ground Bearing Capacities* table (fig. 1.17), please seek instructions and recommendations from Hydro Mobile.

## Setup and configurations

## Standard installation (single mast)

- 1- Installation should be carried out under the supervision of a competent person, in accordance with all applicable Federal, State, and local regulations.
- 2- In reference to the plan/layout drawing, make sure all the components required are available. Establish the position of the motorized unit, determine if there are obstacles and what are the cribbing and wall tie requirements.
- 3- Before installing the motorized unit, determine where the cribbing will rest. The bearing surface under the motorized unit should be level, clear of debris and have the proper bearing capacity (see the *Minimum Ground Bearing Capacities* table, fig. 1.17, p. 13). Should the actual bearing capacity be inferior to the values in the table, please seek instructions and recommendations from Hydro Mobile. It is important to note that the **jacks on the base pedestal extension** are designed to level the motorized unit and **should not be used to support the load nor the motorized unit**.
- 4- Distance from finished wall should be number of planks x 10" (25 cm) while allowing 6 to 8" (15 to 20 cm) of play. Add an additional 2" (5 cm) if using a toe board. Refer to OSHA 1926.453 (b) and other applicable local regulation to determine play or the maximum allowable distance between the motorized unit, including its accessories, and the face of the work.
- 5- Unload the motorized unit with a forklift or a crane, lifting it by the mast head (see fig. 1.1, p. 8). For more information on the lifting capacity of the mast head, refer to p. 35 of the *Masts and Wall Ties* section.
- 6- Align the base of the motorized unit with the face of the work and lower it into position.
- 7- Using the jacks on the base pedestal extension, level the mast on both its front and side axis, then, if required, use metal shims to adjust the base pedestal so it sits squarely and level on the cribbing.
- 8- Using a bridge installation support bracket, install only one bridge on both sides of the mast. For more information about bridge installation and the use of the bridge installation support bracket, refer to p. 23 of the *Bridges* section. Make sure the setup follows the guidelines for pre-installation. Refer to p. 36 of the *Masts and Wall Ties* section for more information about pre-installation. Adjust the outriggers and install planks, as required (see p. 45 of the *Accessories* section for more information).
- 9- Using one or two optional jib arms, a crane or a forklift, load mast sections on the platform (see p. 49 of the *Accessories* section for more information on the use and installation of jib arms). **Mast sections should be distributed equally on either side of the mast to ensure good balance.** Refer to the *Load Capacities* section on p. 40 for more information about loading the platform.
- 10- **Before installing mast sections**, turn the ignition key to the ON position and review the indicator lights on the control panel. When the **motorized unit** is at **base pedestal level**, the **top/bottom final limit** and the **top/bottom limit indicator lights** should be **flashing**. Inspect the strobe under the main frame and make sure it is working appropriately.
- 11- With the motorized unit at base pedestal level and the ignition key at the ON position, test the top final limit switch by placing a metallic object in front of it. If the switch is working properly, the top/bottom final limit indicator light should stop flashing on the control panel.

**WARNING**

The **jacks on the base pedestal extension** are designed to level the motorized unit and **should not be used to support the load nor the motorized unit**.

## Setup and configurations (cont'd)

## Standard installation (single mast) (cont'd)

- 12- Remove the mast head and install one mast section. The top/bottom final limit indicator light on the control panel should no longer flash. Test the bottom final limit switch (the highest of both bottom proxy switches) by placing a metal object in front of it. If the switch is working properly, the top/bottom final limit indicator light should start flashing on the control panel.
- 13- Test the bottom limit switch by raising the unit about 6" (15,2 cm) above base pedestal level. If the bottom limit switch is working properly, its indicator light should stop flashing on the control panel.
- 14- With the motorized unit still about 6" (15,2 cm) above base pedestal level (and with the top/bottom limit indicator light still not flashing on the control panel), test the top limit switch by placing a metal object in front of it. The top/bottom limit indicator light should start flashing on the control panel.
- 15- If any of the limit switches are not working properly, call the distributor or the Hydro Mobile technical support team. For more information about limit switches and their indicator lights, refer to the *Control Panel* section on p. 30 and to the corresponding troubleshooting procedures at the end of this manual.
- 16- Proceed with the installation of mast sections. Refer to p. 35 of the *Masts and Wall Ties* section for more details on how to install mast sections.
- 17- Continue installing mast sections until a wall tie is required, making sure throughout the process that the mast remains plumb on both its front and side axis. Refer to the *Masts and Wall ties* section on p. 36 for instructions about the installation of wall ties.
- 18- Install as many mast sections as required by the layout plan. A setup should not be raised over 500' (152 m), unless authorized in writing by Hydro Mobile prior to installation. Make sure that the last mast section is **at least 3' (0.9 m)** above the mast guard. Consequently, **at least 3' (0.9 m)** of mast section must be visible above the mast guard **at all times when the motorized unit is in operation**. Install the mast head on top of the last mast section (see p. 35 of the *Masts and Wall Ties* section for instructions).
- 19- Lower the motorized unit to base pedestal level, verifying the wall ties and the mast bolts on the way down and making sure that all are properly secured and in good condition. Apply grease to the rack(s) and gears and allow the grease to stand for 2-3 hours. Use Chevron open gear lubricant (part # A0560001-0000).
- 20- With the motorized unit at base pedestal level, complete the installation of bridges as required and allowed. Refer to the *Load Capacities* section on p. 40 for more information on the number of bridges allowed in a setup.
- 21- Once the installation of bridges is complete, remove and store the jib arm(s), if necessary.
- 22- Make a final verification of the setup before authorizing workers to use the motorized unit. Make sure the access stairs and all the guardrails are in place and secure (see the *Accessories* section on p. 45 for more information about guardrails and access stairs). In all cases where workers are exposed to fall hazards greater than specified by OSHA or local regulations, the installation of guardrails or face guardrails is **mandatory**.
- 23- Adjust the outriggers and install planks, as required (see p. 45 of the *Accessories* section for more information).

**WARNING**

The last mast section must be **at least 3' (0.9 m)** above the mast guard. Consequently, **at least 3' (0.9 m)** of mast section must be visible above the mast guard **at all times when the motorized unit is in operation**.



## Setup and configurations (cont'd)

## Multiple mast installation

(requires two twin mast adapters – sold separately)

- 1- In reference to the plan/layout drawing, make sure all the motorized units and components required are available. Establish the position of each motorized unit (see the *Distances* table, fig. 1.18 on p. 16), determine if there are obstacles and what are the cribbing and wall tie requirements.
- 2- Set up the first motorized unit as described in the standard installation instructions (single mast) on p. 14 (steps 1 through 8).
- 3- Attach a twin mast adapter to the first motorized unit. Refer to p. 25 of the *Bridges* section for more information on the installation of a twin mast adapter. Connect the inclinometer to the control panel, as instructed on p. 21 (see the *Control Panel* section on p. 30 for more information).
- 4- Install as many bearing bridges as required and allowed. Refer to the *Bridges* section on p. 22 for more information on bearing installations and the use of bridge installation accessories such as the bridge lifting bar and the bridge installation support bracket. Refer also to the *Load Capacities* section on p. 40 for the maximum number of bridges allowed in a bearing bridge setup.
- 5- Attach a second twin mast adapter to the last bridge of the setup. Bolt the second motorized unit to that twin mast adapter (fig. 3.9, p. 23) and connect the inclinometer to the control panel.
- 6- Before lowering the base of the second motorized unit, determine where the cribbing will rest. The bearing surface under the motorized unit must be level, clear of debris and have the proper bearing capacity (see *Minimum Ground Bearing Capacities* table, fig. 1.17, p. 13). Set the cribbing and lower the base of the motorized unit.

Distances for a bearing installation (approximate distances)		
No. of bridges	Distances from center to center of masts	Distances between main frames
10	65' (19.8 m)	54'-11" (16.7 m)
9	60' (18.3 m)	49'-11" (15.2 m)
8	55' (16.8 m)	44'-11" (13.7 m)
7	50' (15.2 m)	39'-11" (12.1 m)
6	45' (13.7 m)	34'-11" (10.6 m)
5	40' (12.2 m)	29'-11" (9.1 m)
4	35' (10.7 m)	24'-11" (7.6 m)
3	30' (9.2 m)	19'-11" (6.1 m)

Fig. 1.18

- 7- Using the jacks on the base pedestal extension, level the mast on both its front and side axis, then if required, use metal shims to adjust the base pedestal so it sits squarely and level on the cribbing.
- 8- Proceed with the installation of cantilever bridges on the sides of the motorized units opposite to the bearing structure, as required. Refer to p. 24 of the *Bridges* section for more information on a cantilever installation and to the *Load Capacities* section on p. 40 for the maximum number of bridges allowed in a setup.

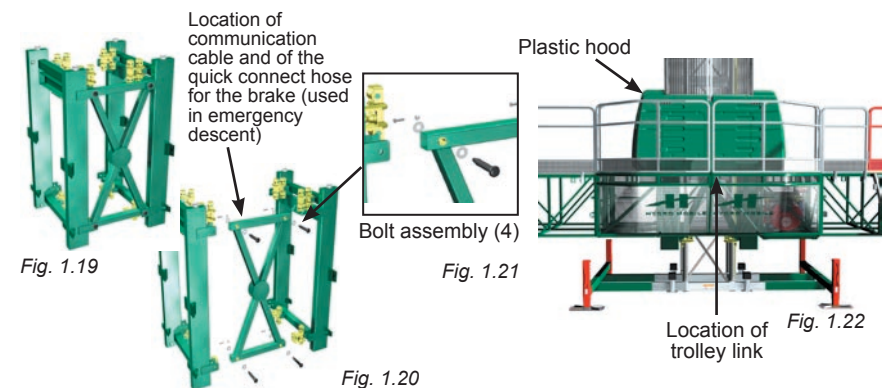
## Setup and configurations (cont'd)

## Multiple mast installation (cont'd)

- 9- With the help of the inclinometers located on the twin mast adapters, verify the level of the bearing installation (see the instructions for using the inclinometer, on p. 21).

## Splitting a motorized unit (applicable to model F300 only)

- 1- Remove both bridge links. Lift the power pack access panels and remove the toggle pins at the bottom of the plastic hoods on either side of the mast (fig. 1.22). Remove the plastic hoods.
- 2- Disconnect both ends of the communication cable between the two control panels and both ends of the quick connect hose for the brake (used in emergency descent). Properly store the cable and the quick connect hose for future use.
- 3- Remove all bolt assemblies from each retaining pin and then remove the retaining pins from the trolley link connection (fig. 1.20 and fig. 1.21).
- 4- Remove the trolley link and store it properly for future use.
- 5- Replace the plastic hoods and secure them with toggle pins. Replace the bridge links and close the bridge link doors.
- 6- On each control panel, turn the link control switch to the NO (unlinked) position (see p. 31 of the *Control Panel* section for more information). Make sure the trolley link and the bridge link door indicator lights on the control panel are not turned on.
- 7- Reset both control panels by disconnecting and reconnecting the battery in each main frame (see fig. 4.8 on p. 28 of the *Power Pack and Operating Components* section).
- 8- **To link both sides of the motorized unit together again**, replace the trolley link, reconnect the communication cable and the quick connect hose for the brake, open both bridge link doors, turn the link control switch on each control panel to the YES (linked) position and reset both control panels by disconnecting and reconnecting the battery in each main frame.



## NOTE

When splitting or linking a motorized unit, it is mandatory to perform each step in the prescribed order to ensure safe and trouble-free operation of the motorized unit.

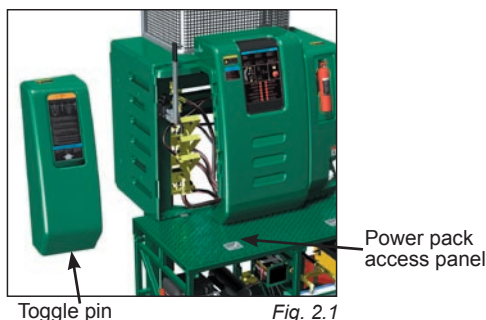
## Safety Devices

### Emergency Descent Control System

In the event of an engine failure, a shortage of gasoline or broken parts, use the gravity-activated emergency descent control system to bring the motorized unit safely down to base pedestal level.

#### Emergency descent procedure for a single mast installation

- 1- On **model F300** used in a **linked configuration**, shut down the engine(s) that is(are) still running.
- 2- Before using the Emergency Descent Control System on **all F Series models**, check the hydraulic oil level to make sure it is in the FULL range on the dipstick. For more information, see p. 27 of the *Power Pack and Operating Components* section. The Emergency Descent Control System **must not be used if there is a major hydraulic leak**.
- 3- Visually inspect gears, pinions and rollers and make sure that they are clear of debris and that they are not damaged. The Emergency Descent Control **must not be used if the gear system is damaged**.
- 4- Turn the ignition key to the ON position and make sure that the high oil temperature indicator light does not turn on on the control panel. If the high oil temperature indicator light is blinking, let the oil cool down until the temperature indicator light stops blinking before initiating the emergency descent procedure.
- 5- Once the oil level and temperature have been verified and are appropriate, remove the power pack access panel and remove the toggle pin at the bottom of the plastic hood on the left-hand side of the control panel (fig. 2.1). Lift and remove the plastic hood to access the control valve levers and the manual pump.
- 6- Under normal operating conditions, all three control valve levers should be in the UP position. To activate the emergency descent system, pull all three levers down, beginning with the bottom lever (see sequence illustrated in fig. 2.3).
- 7- Once all three levers are down, close the manual pump relief valve by turning the knob clockwise (fig. 2.4).
- 8- On **model F300** used in a **linked configuration**, perform steps 1 through 6 on **each** power pack.
- 9- Build up hydraulic pressure by operating the pump handle back and forth **throughout** the emergency descent (fig. 2.5). On **model F300** used in a **linked configuration**, perform this step on **either** power pack. The motorized unit will descend at a speed of about 10' (3.04 m) a minute.

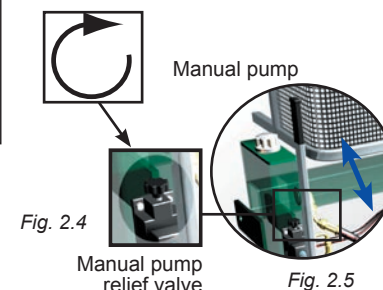
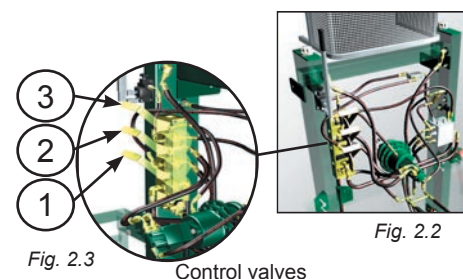


## Safety Devices (cont'd)

### Emergency Descent Control System (cont'd)

#### Emergency descent procedure for a twin mast installation

- 1- Perform steps 1 through 5 of the emergency descent procedure for a single mast installation at the **end of the structure** where the engine has **failed**.
- 2- Make sure that the operating engine is still running at the other end of the bearing structure. Proceed with steps 6 through 8 of the emergency descent procedure for a single mast installation.
- 3- As the end of the bearing structure in emergency descent begins to descend at a speed of about 10' (3.04 m) a minute, push the **descent** control button **halfway** in (first speed) at the **operating end of the bearing structure** to bring that side down **as simultaneously as possible**. Throughout descent, the inclinometer will automatically stop the operating end of the structure and restart it when the bearing structure is level.



#### Interruption of an emergency descent

- 1- **If the emergency descent needs to be interrupted**, open the manual pump relief valve by turning the knob **counterclockwise** to release the hydraulic pressure. On model F300 used in a **linked configuration**, this step can be performed on **either** power pack. In a **twin mast configuration**, immediately release the descent control button at the operating end of the bearing structure.
- 2- If the emergency descent control system needs to be reactivated, close the manual pump relief valve again (see step 7, on p. 18) and operate the pump handle back and forth to resume the emergency descent. On model F300 used in a **linked configuration**, this step can be performed on **either** power pack.

#### Resuming normal operation of the motorized unit

Once the motorized unit has been brought safely to base pedestal level, open the manual pump relief valve by turning the knob counterclockwise and raise all three levers, starting from the top. Replace the plastic hood and secure with a toggle pin. The engine cannot be started if all or any of the levers of the control valves are down. For more information, see the *Emergency Descent* troubleshooting procedure at the end of this manual.

### Safety Devices (cont'd) Overspeed Safety Device

The Hydro Mobile F Series (models F100, F200 and F300) is equipped with an overspeed safety device. This safety feature is designed to prevent the motorized unit from falling and is triggered automatically. This device will immobilize the motorized unit instantly.

The overspeed safety device is protected by two safety seals that guarantees the end user that the safety device has not been tampered with or altered in any way by an unauthorized person. Each manufactured safety seal is given a unique serial number which is kept on record by Hydro Mobile. These seals can only be removed for inspection of the overspeed safety device by an appropriately trained and competent, authorized technician and will be replaced by new seals once the inspection is complete.

The overspeed safety device cannot be triggered on at will, except for inspection purposes by an authorized technician. Any other activation of the overspeed safety device must be investigated by an authorized technician.

#### Activation of the overspeed safety device

In the event of an activation of the overspeed safety device, the operator must contact the distributor or the Hydro Mobile technical support team. All precautions must be immediately taken to ensure the safe return of all workers to base pedestal level according to the evacuation plan (see step 13 on p. 7 of the *Performance and Safety* section).

Once the overspeed safety device is triggered, the motorized unit stops and the control panel cannot be operated. The control panel must be reactivated with a special bypass key. Operation of the motorized unit can only be resumed once the structure has been fully inspected by an appropriately trained and competent, authorized technician who is in possession of the bypass key.

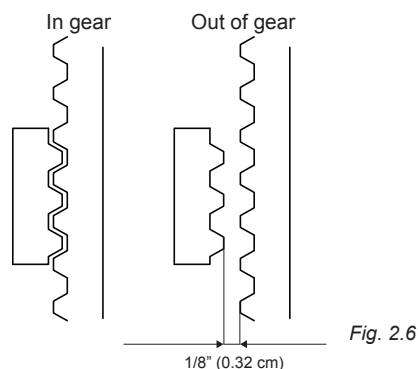


Fig. 2.6



#### WARNING

Once the overspeed safety device is triggered, all precautions must be taken to ensure the safe return of all workers to base pedestal level, according to the evacuation plan. Operation of the motorized unit can only be resumed after inspection by an appropriately trained and competent, authorized technician who is in possession of the required bypass key.

### Safety Devices (cont'd) Inclinometer

Used only in bearing configurations, the inclinometer is located on the twin mast adapter and must **absolutely** be connected to the control panel. The inclinometer will detect any  $\pm 2$ - or  $\pm 5$ -degree slope of the structure and trigger an indicator light on the control panel to warn the operator. For more information on the installation and use of a twin mast adapter, see p. 25 of the *Bridges* section. For more information about event indicator lights, see p. 32 of the *Control Panel* section. Refer also to the appropriate troubleshooting procedure at the end of this operator's manual.

#### Connection

- 1- Make sure the twin mast adapter is properly bolted to the main frame (6 bolts). Refer to p. 25 of the *Bridges* section for more information on the use and installation of a twin mast adapter.
- 2- Connect one end of the inclinometer extension cable to the inclinometer.
- 3- Lift both power pack access panels on the main frame and lift and remove both lateral plastic hoods next to the control panel by removing the toggle pins at the bottom. Lift and remove the plastic hood housing the control panel.
- 4- Run the inclinometer extension cable through the bottom part of the main frame. Remove the terminator plug from the inclinometer connector under the control panel, store it in the toolbox and connect the extension cable in its place. Replace the plastic hoods and secure the lateral panels with toggle pins.

#### Detection of a $\pm 2$ -degree slope

- 1- When the motorized unit is in movement, if the inclinometer detects a slope of  $\pm 2$  degrees, a signal is automatically sent to the control panel and the  $\pm 2$ -degree indicator light is triggered on.
- 2- **On models F100 and F300, during ascent at second (high) speed**, the motorized unit that is at the highest level will automatically shift to first (low) speed while the lowest side will continue to rise at second (high) speed until the structure is brought back to level. If the structure is rising at first (low) speed, the highest motorized unit will stop completely until the structure is back to level. **During ascent**, if the highest motorized unit is a **model F200**, it will automatically **stop and fail to resume ascent** until the structure is brought back to level.
- 3- **On models F100 and F300, during descent at second (high) speed**, the motorized unit that is at the lowest level in the configuration will automatically shift to first (low) speed while the highest side will continue to descend at second (high) speed until the structure is brought back to level. If the structure is descending at first (low) speed, the lowest motorized unit in the configuration will stop completely until the structure is back to level. **During descent**, if the lowest motorized unit is a **model F200**, it will automatically **stop and fail to resume descent** until the structure is brought back to level.

#### Detection of a $\pm 5$ -degree slope

- 1- When the motorized unit is in movement, if the inclinometer detects a slope of  $\pm 5$  degrees, a signal is automatically sent to the control panel and the  $\pm 5$ -degree indicator light is triggered on.
- 2- **During ascent**, the motorized unit that is at the highest level in the configuration will automatically **stop and fail to resume ascent** until the structure is brought back to level.
- 3- **During descent**, the motorized unit that is at the lowest level in the configuration will automatically **stop and fail to resume descent** until the structure is brought back to level.
- 4- If the inclinometer or its connection is defective, the motorized unit will not operate. In that case, call the distributor or the Hydro Mobile technical support team.



## Standard bridge

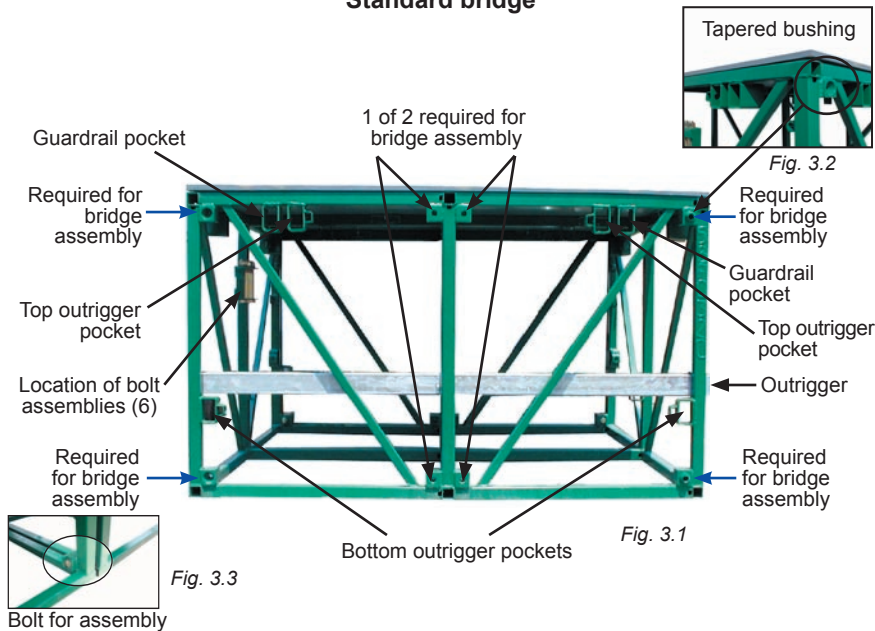


Fig. 3.1

## Installation

- 1- Align both bridges using the tapered bushings (blue arrows, fig. 3.1).
- 2- Assemble both bridges together using 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 (fig. 3.1 and 3.2) and in one of the pairs of tapered bushings in the middle of the bridge (using both top and bottom bushings on the same side – left or right, fig. 3.1).
- 3- Set up bridges alternately on each side of the mast in such a sequence as to warrant the balance of the structure.

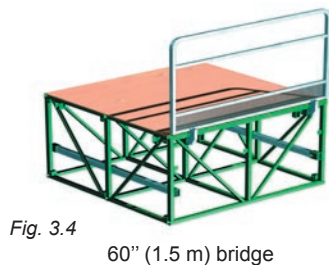


Fig. 3.4

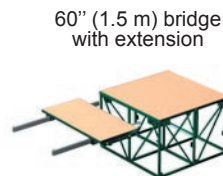


Fig. 3.5

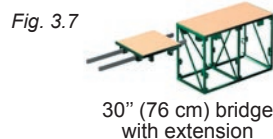


Fig. 3.7

30" (76 cm) bridge

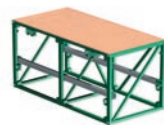


Fig. 3.6

## Bridge Installation Accessories

## Bridge installation support bracket

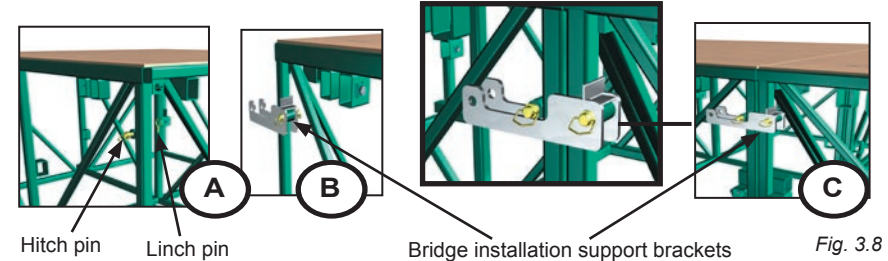


Fig. 3.8

- Step A:** Under the bridge to be installed, slide hitch pins in the designated holes on both sides of the bridge and secure them with linch pins.
- Step B:** Using other hitch pin and linch pin assemblies, attach the bridge installation support brackets to the bridge already bolted to the base or to another bridge.
- Step C:** Lift the bridge to be installed and lower it down so that the hitch pins are completely supported by the bridge installation support bracket. Assemble the bridges using the appropriate bolts and nuts. Remove the brackets when the bridges are bolted together.

## NOTE

The bridge installation support bracket and the bridge installation method described above can only be used when the motorized unit is at base pedestal level.

## Bridge lifting bar

Slide the bridge lifting bar and screw jacks (fig. 3.10) at least 6" (15 cm) in under the outer edge of a bearing bridge assembly. Using the jacks, raise the bridge lifting bar under the bridge assembly until this one is **slightly** at an angle. Align the next bridge and bolt both bridges together (see p. 22 for more information on the installation of a standard bridge). The installation of most bearing configurations will require up to two bridge lifting bars.

Continue installing bridges, using one bridge lifting bar every **other** bridge and alternating their position throughout the installation process, as illustrated below. Refer to the *Load Capacities* section on p. 40 for more information on the number of bridges allowed in a setup.

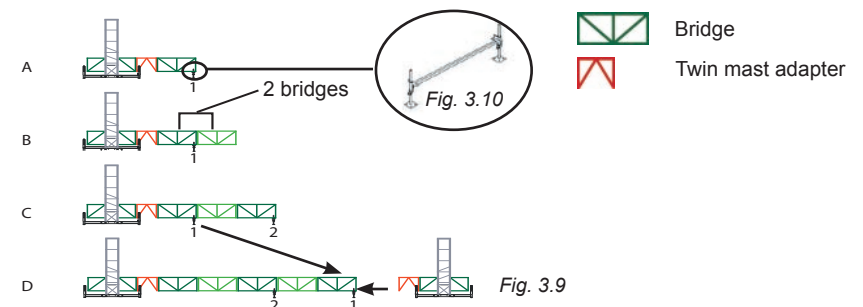


Fig. 3.9

## Cantilever Bridge

### Installation

- 1- Make sure that both inclinometer terminator plugs are in place under the control panel (factory default) and that there is no twin mast adapter bolted to the main frame. For more information on the inclinometer and its connection, see p. 21 of the *Safety Devices* section.
- 2- Using a bridge installation support bracket or any other lifting device such as a crane or a forklift, bolt a bridge assembly to the main frame on one side of the mast.
- 3- Bolt a second bridge assembly to the main frame on the other side of the mast, if required.
- 4- Install as many additional bridges as required and allowed. It is important to install each bridge **alternately** on one side, then on the other side of the mast, to avoid throwing the structure out of balance. The number of bridges should be **equal on both sides** of a cantilever installation. Refer to the *Load Capacities* section on p. 40 for information on the number of bridges allowed in a cantilever bridge configuration.
- 5- For any configuration other than described in the previous steps or in the *Load Capacities* section, contact the distributor or the Hydro Mobile technical support team.

## Bearing Bridge

(requires the use of two motorized units and two twin mast adapters)

### Installation

- 1- Install a twin mast adapter on the first motorized unit. For more information on the use and installation of a twin mast adapter, see p. 25 of this section.
- 2- With the help of a bridge installation support bracket, a bridge lifting bar or any other lifting device such as a crane or a forklift, raise the twin mast adapter until it is **slightly** at an angle and install an additional bridge.
- 3- If using a bridge lifting bar, leave it in place. After two additional bridges have been installed, slide a second bridge lifting bar under the last bridge installed, as shown in fig. 3.9, on p.23. Alternate the position of the bridge lifting bars every two bridges added throughout the installation process.
- 4- Repeat steps 1 through 3 until the setup has the desired length. Refer to the *Load Capacities* section on p. 40 for the maximum number of bridges allowed in a bearing bridge configuration. Leave a bridge lifting bar under the last bridge installed.
- 5- Install a twin mast adapter on the second motorized unit. Bolt the second motorized unit and its twin mast adapter to the last bridge installed and remove the remaining bridge lifting bar, if required. Make sure to remove the locking plates on each twin mast adapter before raising the bearing structure and to plug in each inclinometer. Refer to p. 25 of this section for more information on the installation of a twin mast adapter and to p. 21 of the *Safety Devices* section for more information on the inclinometer and its connection.
- 6- In a bearing bridge setup, it is **important** to add any additional **cantilever bridge** **after** the bearing bridge structure has been installed to avoid throwing the structure off balance.

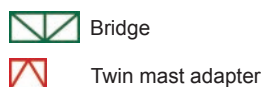


Fig. 3.11

## Twin Mast Adapter

(optional)

(required for a bearing bridge configuration)

### Installation

- 1- Position the twin mast adapter so that the inclinometer is on the **bearing** side of the structure, **opposite** to the main frame (fig. 3.12).
- 2- Using the tapered bushings, align the twin mast adapter with the main frame. If the welded stoppers on the bottom trusses of the main frame and the twin mast adapter prevent proper alignment, the twin mast adapter is not correctly positioned (see step 1).
- 3- Using 5/8" x 5 1/2" (GR8) hex bolts, 5/8" (GR8) lock washers and 5/8" (GR8) nuts, attach the twin mast adapter to the main frame and make sure all the bolt assemblies are tight and secure.
- 4- Lift and unhook the top and bottom locking plates at both ends of the twin mast adapter (fig. 3.12). Failure to do so could result into serious damages.
- 5- Push in the twin mast adapter until it is snug against the main frame and the sliding pin is close to the main frame.

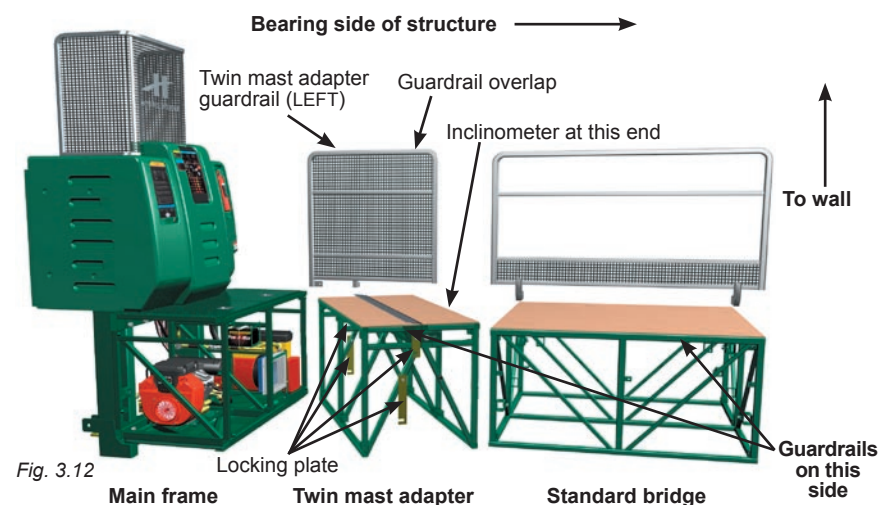


Fig. 3.12

- 6- Connect the inclinometer to the control panel. For more information on the use and installation of the inclinometer, see p. 21 of the *Safety Devices* section and the *Control Panel* section, on p. 30.
- 7- Select the appropriate twin mast adapter guardrail (left or right). The twin mast adapter guardrail should overlap the guardrail of the bridge assembly that will later be attached to the twin mast adapter. Install the guardrail by inserting the connecting lugs (2) in the tubes at the top of the twin mast adapter structure. Secure with a toggle pin.
- 8- Install as many bridges as required and allowed. See p. 24 of this section for more information on the installation of a bearing bridge structure. For the number of bridges allowed in a bearing bridge configuration, refer to the *Load Capacities* section on p. 40.
- 9- Repeat steps 1 through 7 to install the second twin mast adapter.
- 10- To remove the twin mast adapter, disconnect the inclinometer, remove the twin mast adapter guardrail, replace the locking plates (4) and unbolt the twin mast adapter from the main frame. Make sure to replace all the terminator plugs on the control panels.

### Forward/Back Extension Bridge (optional)

The extension bridge (used in front or in back of a motorized unit setup) is assembled using a regular bridge and the optional forward extension kit, which includes an outrigger and three forward extension plate assemblies. In a configuration using a **forward** extension, the bridge used as an extension must be attached to the **first** bridge assembly closest to the mast in the setup. In a configuration using a **back** extension, the bridge used as an extension must be attached to the **first** bridge assembly closest to the mast in the setup. In all cases, a bridge used as an extension, back or forward, **cannot** be attached **directly** to the motorized unit.

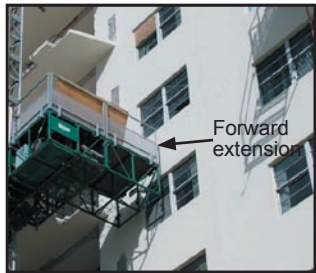
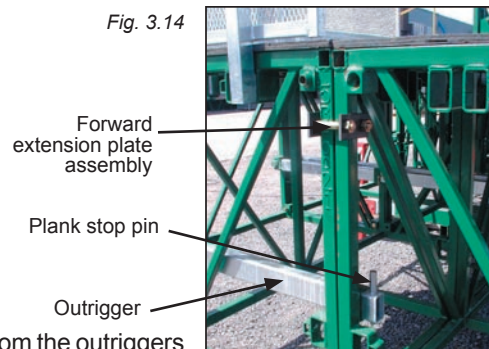


Fig. 3.13

Fig. 3.14



#### Installation

- 1- Remove the plank stop pins from the outriggers and slide the outriggers in the bottom outrigger pockets of the bridge assembly, leaving about 6" (15 cm) protruding from the bridge. Do not tighten the bolts.
- 2- Align the bridge that will be used as an extension with the bridge assembly and slide the protruding ends of the outriggers from the bridge assembly in the bottom outrigger pockets of the back or forward extension. Insert a plank stop pin in each outrigger (fig. 3.14).
- 3- Install the forward extension plate assemblies at the top of each of the vertical tubes of the bridge assembly in order to hold both bridges tightly together (fig. 3.14). Make sure all the nuts and bolts are tight.
- 4- Tighten all the nuts and bolts on the outriggers.
- 5- Install the appropriate guardrails on the back or forward extension.
- 6- If required, install cross box kits to plank the inside corner of the bridge used as an extension (see fig. 7.8 on p. 44). For more information on the use and installation of cross boxes, refer to p. 46 of the *Accessories* section.
- 7- If required, use the forward/back extension to store counterweight material or to install top outriggers and planking on the opposite end of the bridge assembly (fig. 3.15 and 3.16) and apply counterweight.

For more information on the load capacity of a forward/back extension bridge, refer to p. 44 of the *Load Capacities* section. For any configuration using forward or back extensions other than those shown in fig. 3.15 and 3.16, contact the distributor or the Hydro Mobile technical support team.

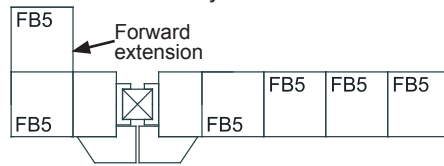


Fig. 3.15

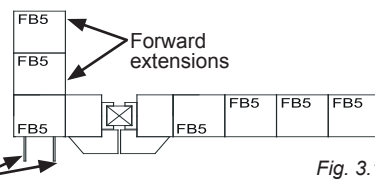


Fig. 3.16

### Overview of Power Pack and Components

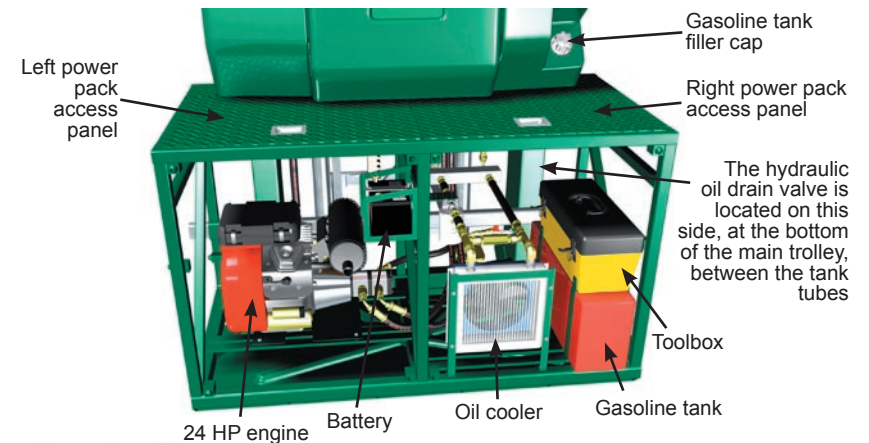


Fig. 4.1

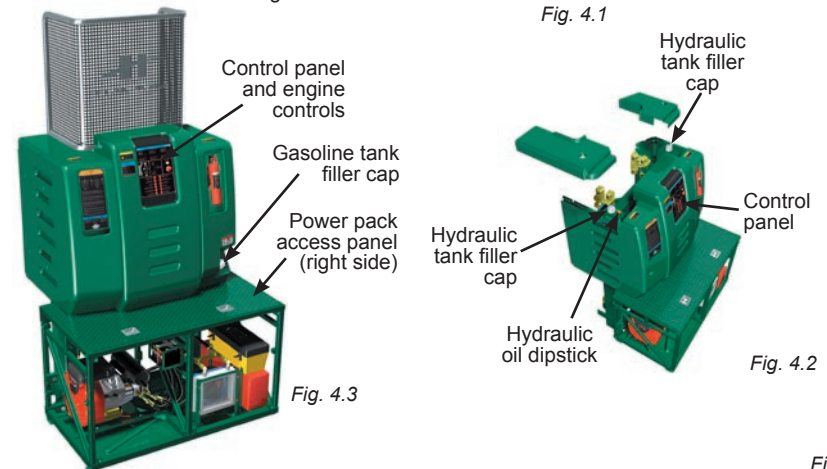


Fig. 4.2

Fig. 4.3

Fig. 4.4

#### Toolbox Components

Quantity	Description	Product code
2	12.5-oz (370 ml) aerosol cans of grease for rack and pinion	A0560001-0000
2	bridge installation support brackets	20019301-K-01000-4
1	Operator's manual	A0680004-0000
1	Honda engine manual	A0680100-0000
3	5/8" x 1 1/2" SAE bolts GR5	A0310005-0003
3	5/8" SAE GR5 nuts	A0330007-0000
6	5/8" x 5 1/2" SAE bolts GR8	A0310005-0017
6	5/8" SAE GR8 nuts	A0330007-0001
6	5/8" SAE lock washers GR8	A0340109-0000
3	3/8" SAE toggle pins	A0690606-0000
3	1/8" x 2 5/8" hitch pin clips	A0690202-0000
3	plank stop pins	10020202-1-10000-4



## Power Pack and Operating Components (cont'd)

### Startup preparation instructions

- 1- Perform a safety inspection of the motorized unit and make sure that the overspeed safety device is not in gear. For more information on the overspeed safety device, refer to p. 20 of the *Safety Devices* section.
- 2- Check the hydraulic oil level to make sure it is in the FULL range on the dipstick. If necessary, remove the power pack access panel, remove the toggle pin at the bottom of the left plastic hood next to the control panel and remove it (fig. 4.2, on p. 27) and replenish with Shell Naturelle HF-M biodegradable hydraulic oil.
- 3- Check the gasoline level and refill if necessary. During the operation of the motorized unit, if the low gasoline level indicator light turns on on the control panel (see the *Control Panel* section, on p. 30), the gasoline tank must be refilled immediately.
- 4- Lift the left power pack access panel (fig. 4.6) and check the engine oil level. If necessary, refill in accordance with the specifications in the Honda engine user's manual.
- 5- Lift the right power pack access panel and turn the gasoline valve lever to the ON (operating) position, in line with the hose (see fig. 4.7).
- 6- If the motorized unit is brand-new, was transported from one job site to another or was stored for a significant length of time, connect the battery. It should be noted that the battery (or batteries) may have to be recharged before the motorized unit can be used again.
- 7- On model F300 or in a configuration using more than one power pack, repeat steps 1 through 5 for each power pack.

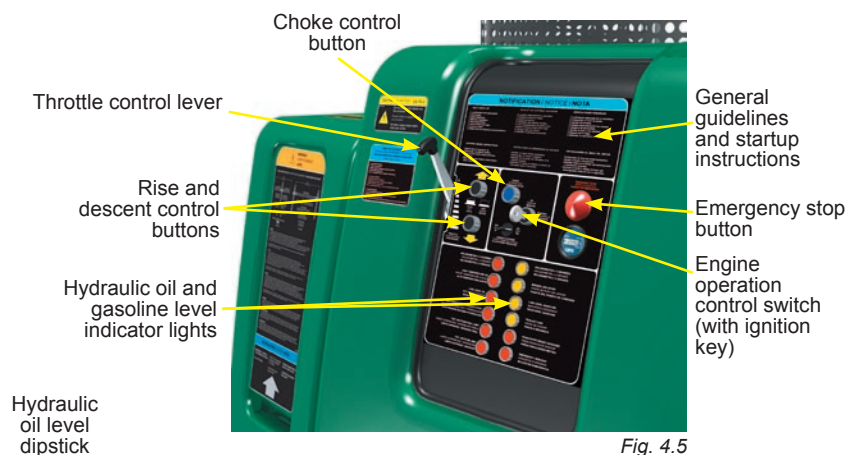


Fig. 4.5

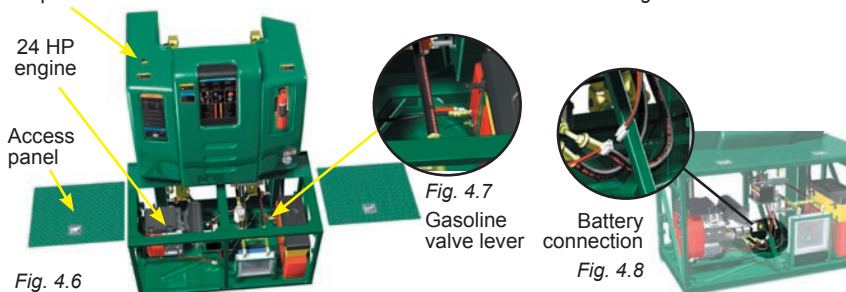


Fig. 4.6



Fig. 4.7



Fig. 4.8

## Power Pack and Operating Components (cont'd)

### Engine and motorized unit startup procedure

- 1- Prepare the motorized unit and the engine by following the *Startup Preparation Instructions* on p. 28.
- 2- Lift the right power pack access panel and retrieve the ignition key from the toolbox (fig. 4.1, on p. 27). Insert the ignition key in the engine operation control switch on the control panel (fig. 4.5).
- 3- Turn the ignition key to the ON position. This will cause the high oil temperature, low oil level and low gas level event indicator lights on the control panel to light up briefly. Then all the indicator lights will blink once in sequence. Any event indicator light that lights up and remains blinking after the initial sequence indicates a fault.
- 4- If any event indicator light is blinking on the control panel, take the proper corrective action. It should be noted that if the motorized unit is at base pedestal level, the top/bottom limit and top/bottom final limit indicator lights will flash on the control panel. If no other indicator light is on, proceed with the next step of the startup procedure.
- 5- Lower the throttle control lever (fig. 4.5) at a 1/4 of the way.
- 6- If the engine is cold, push and hold the choke button.
- 7- Turn the ignition key to the STARTER position and hold until the engine starts (hold for no more than 10 seconds at a time).
- 8- Release the choke button once the engine has started. In cold weather, hold the choke button a little longer.
- 9- Lower the throttle control lever all the way down to reach maximum RPM. In cold weather, let the engine run at full throttle for a few minutes to warm up the hydraulic system.
- 10- On model F300 or in a configuration using more than one power pack, repeat steps 1 through 9. In a **linked** configuration using **model F300** it is **mandatory** to **start both Honda engines**.

### NOTE

If the control panel does not work when the ignition key is turned to the ON position, make sure the battery is plugged in and that it has enough voltage. If the control panel still does not work, call the distributor or the Hydro Mobile technical support team.

### Engine and motorized unit shutdown procedure

- 1- In a bearing installation, make sure that the inclinometer indicator lights on the control panels are not turned on and that the structure is level.
- 2- Push the throttle control lever all the way up (idle position).
- 3- Turn the ignition key **all the way to the left** (OFF position) to shut down the engine. Remove the ignition key from the starter switch and store it in the toolbox for future use (fig. 4.1).
- 4- Turn the gasoline valve lever to the OFF position (fig. 4.7) and replace the access panel.
- 5- Before transporting or storing the motorized unit for any significant length of time, make sure the battery is disconnected. For more information on the transport and storage of a motorized unit, refer to p. 50 of the *Transport, Storage and Maintenance* section.
- 6- For model F300 or in configurations using more than one power pack, repeat steps 1 through 5 for each power pack.



### WARNING

The emergency stop button must never be used to shut down the engine except in the case of an emergency. The ignition key must not be left at the ON position longer than necessary as this will drain the battery.

## Control Panel

The control panel is the brain behind the Hydro Mobile F Series system. The F Series control panel (models F100, F200 and F300) is divided into two sections: the top half houses the engine, operation and configuration controls, while event indicator lights are displayed on the bottom half. Driven by a computer system programmed to detect and analyze every signal and react accordingly, the control panel will notify the operator of any important event with the appropriate indicator light (see fig. 5.4 and the *Control Panel – Event Indicator Lights* descriptions and instructions, on p. 32). The descriptions and instructions on the control panel are shown in **three operating languages** (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 operator's manual, contact the distributor or the Hydro Mobile technical support team.

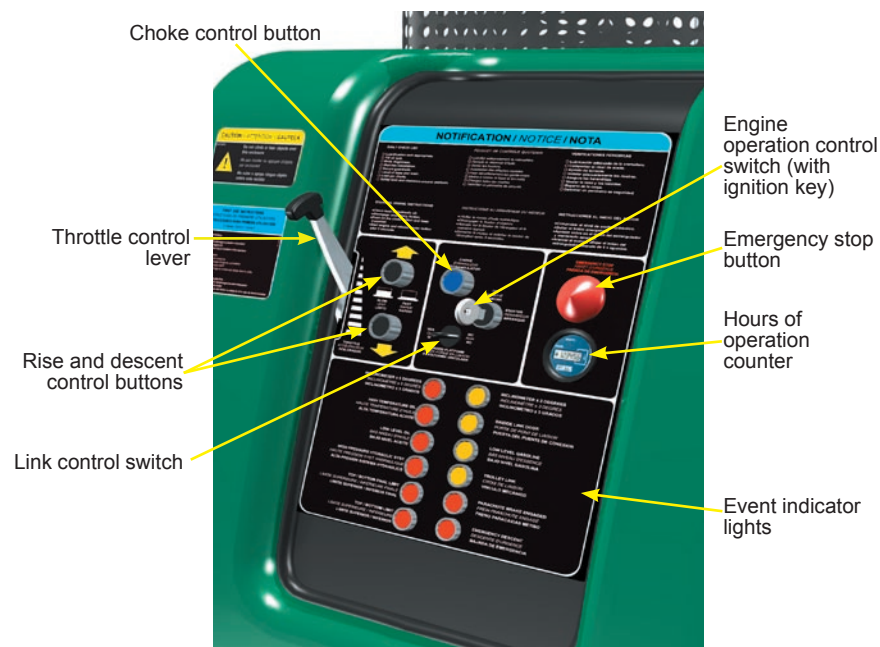


Fig. 5.1

On model F300, in a linked configuration, with **both engines at full throttle**, the control panel will automatically analyze and balance the hydraulic pressure values on both sides of the mast by reducing the oil pressure on the “faster” side. This could translate into slight jolts that may be perceived by the operator or the workers and is no cause for alarm.

## Control Panel (cont'd)

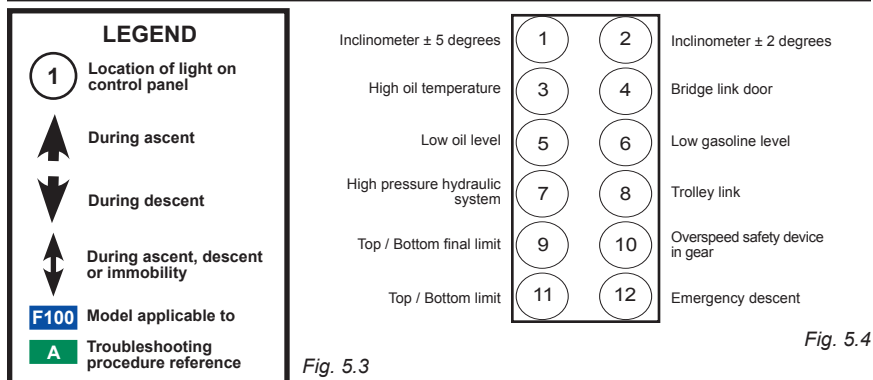
Control Panel Controls		
Control	Description	Action to be performed
Throttle control lever	Controls the engine speed.	Pull down 1/4 of the way to start engine. Pull down all the way for full throttle.
Rise control button <sup>(1)</sup>	Controls the rise of the motorized unit.	On models F100 and F300, push halfway in for first (low) speed. On models F100 and F300, push all the way in for second (high) speed.  NOTE: Model F200 is equipped with only one speed that is activated by either pushing the button halfway or completely in.
Descent control button <sup>(1)</sup>	Controls the descent of the motorized unit.	On models F100 and F300, push halfway in for first (low) speed. On models F100 and F300, push all the way in for second (high) speed.  NOTE: Model F200 is equipped with only one speed that is activated by either pushing the button halfway or completely in.
Choke control button	Controls the choke.	Push and hold to close the engine choke.
Engine operation control switch <sup>(2)</sup>	Turns on the control panel (when the ignition key is turned to the ON position). Controls the startup (ignition key at STARTER position) and shutdown (ignition key at OFF position) of the engine.	Retrieve the ignition key from the toolbox in the main frame. Turn the key all the way to the right and hold to start up the engine (hold for no more than 10 seconds at a time). Turn the key all the way to the left to shut down the engine.
Link control switch (functional on model F300 only)	Determines the operation of the motorized unit in either linked or unlinked configuration.	For operation in an unlinked configuration, disconnect the communication cable and the quick connect hose for the brake (emergency descent), remove the trolley link, close the bridge link doors and turn the link control switch on both control panels all the way to NO (unlinked). The factory default setting for this switch is YES (linked). Reset both control panels by disconnecting and reconnecting the battery in each main frame.  <b>Note: this switch is functional on model F300 only.</b>
Emergency stop button	Shuts down the engine and turns off the control panel.	Push to stop the motorized unit immediately.
Hours of operation counter	Registers the number of hours of operation of the motorized unit (when the ignition key is at the ON position and control panel is turned on).	No action to perform.
Event indicator light (one for each event)	Notifies the operator of important events.	Take prompt and appropriate corrective action.

<sup>(1)</sup> For more information, see the instructions regarding the inclinometer in the *Safety Devices* section on p. 21 and in the descriptions of control panel event indicator lights in the following pages.

<sup>(2)</sup> For more information on engine startup and shutdown procedures, see the *Power Pack and Operating Components* section (p. 29).

Fig. 5.2

## CONTROL PANEL – EVENT INDICATOR LIGHTS



- 1** **Inclinometer ± 5 degrees**  
*Detection of a ±5-degree slope on a bearing structure*
- EVENT:** Highest motorized unit of the bearing setup stops
- ACTION:** Raise the lowest side of the setup until the control panel gives a ± 2- or 0-degree level reading.  
 Refer to the troubleshooting reference page for more information.
- EVENT:** Lowest motorized unit of the bearing setup stops
- ACTION:** Lower the highest side of the setup until the control panel gives a ± 2- or 0-degree level reading.  
 Refer to the troubleshooting reference page for more information.
- 2** **Inclinometer ± 2 degrees**  
*Detection of a ±2-degree slope on a bearing structure*
- EVENT:** Highest motorized unit of the bearing setup switches to 1<sup>st</sup> speed on models F100 and F300, or stops on model F200 (F100 and F300 motorized units stop if already operating in 1<sup>st</sup> speed)
- ACTION:** No action; the lowest side of the setup will continue to rise until the setup has a 0-degree level reading; the highest motorized unit will then automatically start rising again or switch back to 2<sup>nd</sup> speed.  
 Refer to the troubleshooting reference page for more information.
- EVENT:** Lowest motorized unit of the bearing setup switches to 1<sup>st</sup> speed, on models F100 and F300, or stops for model F200 (F100 and F300 motorized units stop if already operating in 1<sup>st</sup> speed)
- ACTION:** No action; the highest side of the setup will continue to descend until the setup has a 0-degree level reading; the lowest motorized unit will then automatically start descending again or switch back to 2<sup>nd</sup> speed.  
 Refer to the troubleshooting reference page for more information.

## NOTE

For more information on event indicator lights and their warnings, refer to the troubleshooting reference pages at the end of this manual. For any event other than those described in this manual, call the distributor or the Hydro Mobile technical support team.

## CONTROL PANEL – EVENT INDICATOR LIGHTS

Continued from page 32

- 3** **High oil temperature**  
*Detection of high temperature of hydraulic oil*
- EVENT:** Motorized unit switches to 1<sup>st</sup> speed on models F100 and F300, or stops on model F200
- ACTION:** Keep the engine running and make sure that the oil cooler fan is working properly.  
 Let the oil cool down until the indicator light no longer blinks.  
 Refer to the troubleshooting reference page for more information.
- 4** **Bridge link door**  
*Detection of a faulty bridge link door*
- EVENT:** Motorized unit stops moving; engine still runs
- ACTION:** Make sure all the bridge link doors are closed properly.  
 Check the proximity switches for malfunction.  
 Refer to the troubleshooting reference page for more information.
- 5** **Low oil level**  
*Detection of a low level of hydraulic oil*
- EVENT:** Motorized unit stops moving; engine still runs
- ACTION:** Check the hydraulic oil level. If necessary, stop the engine and refill.  
 Refer to the troubleshooting reference page for more information.
- 6** **Low gasoline level**  
*Detection of a low level of gasoline*
- EVENT:** Warning only; motorized unit is fully functional
- ACTION:** Replenish the gasoline tank immediately.  
 Refer to the troubleshooting reference page for more information.
- 7** **High pressure hydraulic system**  
*Detection of high pressure of the hydraulic system*
- EVENT:** Motorized unit stops moving; engine still runs
- ACTION:** Verify the load distribution on the platform.  
 Refer to the load capacity charts in the Operator's manual and make the necessary adjustments.  
 Refer to the troubleshooting reference page for more information.

See fig. 5.3 on page 32 for the legend and control panel event indicator lights location

## NOTE

For more information on event indicator lights and their warnings, refer to the troubleshooting reference pages at the end of this manual. For any event other than those described in this manual, call the distributor or the Hydro Mobile technical support team.



## CONTROL PANEL – EVENT INDICATOR LIGHTS

Continued from page 33

8

### Trolley link

Detection of a trolley link fault



**EVENT:** Motorized unit stops moving; engine still runs

**ACTION:** Check the position of the link control switch on the top half of the control panel and set to the correct position according to the setup. Remove or replace the trolley link, as required by the setup. Refer to the troubleshooting reference page for more information.

9

### Top/Bottom final limit

Detection of the top or bottom final limit



**EVENT:** Motorized unit stops moving; engine still runs

**ACTION:** Lower or raise the motorized unit, accordingly. Call an authorized technician immediately. Refer to the troubleshooting reference page for more information.

10

### Overspeed safety device in gear

Detection of the activation of the overspeed safety device



**EVENT:** Motorized unit and engine stop

**ACTION:** Refer to the instructions included in the operator's manual regarding the activation of the overspeed safety device. Call an authorized technician immediately. Refer to the troubleshooting reference page for more information.

11

### Top/Bottom limit

Detection of the top or bottom limit



**EVENT:** Motorized unit stops moving; engine still runs

**ACTION:** Lower or raise the motorized unit, accordingly. Refer to the troubleshooting reference page for more information.

12

### Emergency descent

Detection of the activation of the emergency descent system



**EVENT:** Motorized unit and engine stop

**ACTION:** Refer to the instructions included in the Operator's manual regarding the activation of the emergency descent system. Restore the system to normal operating conditions. Refer to the troubleshooting reference page for more information.

See fig. 5.3 on page 32 for the legend and control panel event indicator lights location

#### NOTE

For more information on event indicator lights and their warnings, refer to the troubleshooting reference pages at the end of this manual. For any event other than those described in this manual, call the distributor or the Hydro Mobile technical support team.

## Masts and Mast Head

### Installation

- 1- Make sure that the motorized unit is positioned properly. Refer to p. 14 of the *Motorized Unit* section for more information.
- 2- Refer to regulations governing distances between the mast climbing work platform system and electrical lines.
- 3- Remove the mast head (fig. 6.2).
- 4- Using a jib arm (optional – see p. 49 of the *Accessories* section) or any other lifting device such as a crane or a forklift, raise the next mast section and insert it on top of the bottom mast section.
- 5- **On model F100**, make sure that the rack of the mast section is **on the power train side** (fig. 6.2) and aligned with the rack on the bottom mast section. **On models F200 and F300**, make sure to use **twin-rack masts**. It is recommended to handle mast sections carefully so as not to damage the mast rack(s).
- 6- Make sure the masts are properly aligned and 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 (fig. 6.2). Tighten the four bolt and nut assemblies to 150 lb-ft (203 N-m) of torque to secure the mast section in place.
- 8- Repeat steps 4 through 8 for each mast section.
- 9- Make sure the rack(s) on the mast section is(are) sufficiently greased. If necessary, apply grease to the rack(s) and gears and allow the grease to stand for 2-3 hours. Use Chevron open gear lubricant (part # A0560001-0000).
- 10- Install the mast head on top of the last mast section and keep it in place until dismantling the setup.  
**Note:** Mast sections can be pre-assembled in 40' (12 m) sections to speed up assembly when using a crane. A tag line must be used to handle the pre-assembled mast sections.

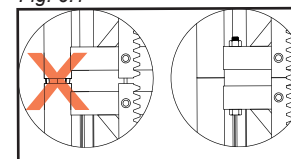
### Lifting capacity of the mast head

The mast head must not be used to lift a setup exceeding one motorized unit, a width of 50' (15.2 m) or 8 x 60" (1.5 m) bridges and a height of 18' (5.5 m) or two masts.

### Storage and transport

- 1- Mast sections must be handled carefully, namely so as not to damage the mast rack(s).
- 2- Mast sections can be stored vertically or horizontally, lying on a side which has no rack, away from work areas and construction traffic.
- 3- If mast sections are to be stored on the platform during erecting and dismantling, make sure they are equally distributed on each side of the mast to ensure good balance. Refer to the *Load Capacities* section on p. 40 to avoid overloading the platform.
- 4- Mast sections can be transported vertically or horizontally, lying on a side which has no rack.

Fig. 6.1



Incorrect

Correct

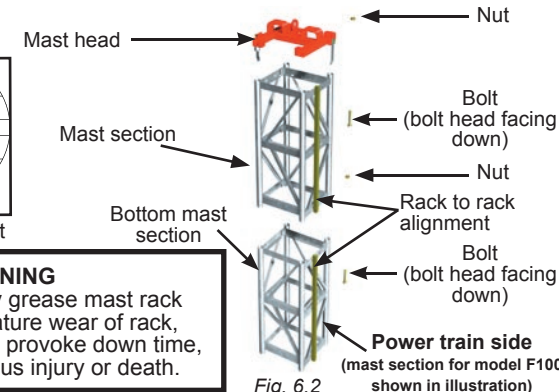


Fig. 6.2

#### WARNING



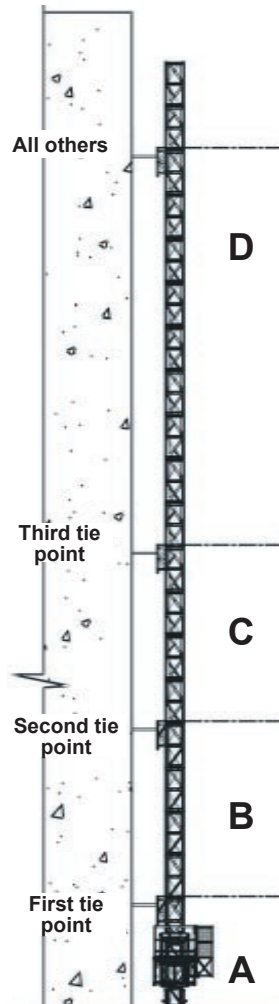
Failure to properly grease mast rack may cause premature wear of rack, pinion and gear and provoke down time, even lead to serious injury or death.

## Wall Ties

Wall tie Schedule		
	No Freestanding Allowed	
	Base pedestal	Base pedestal with extension
Freestanding	N/A	N/A
A (from under base)	10' (3 m)	20' (6.1 m)
B (from A)	20' (6.1 m)	30' (9.1 m)
C (from B)	30' (9.1 m)	45' (13.7 m)
D (from C)	45' (13.7 m)	45' (13.7 m)
Pre-installation of wall ties is mandatory		

Fig. 6.3

Fig. 6.4



## Pre-installation

- 1- The length of the pre-installation setup must not exceed one bridge on each side of the mast.
- 2- Mast sections stored on the platform for pre-installation must be equally distributed on each side of the mast to ensure good balance. Refer to the *Load Capacities* section on p. 40 to avoid overloading the platform.

## Configurations

- 1- For all configurations described above, the maximum overhang allowed over a wall tie is 10' (3 m) when **only one** wall tie is installed. For any other configuration, contact the distributor or the Hydro Mobile technical support team.
- 2- For all configurations described above, the maximum overhang allowed over the last wall tie is 20' (6.1 m) when **two or more** wall ties are installed. For any other configuration, contact the distributor or the Hydro Mobile technical support team.
- 3- Before installing weather protection, it is **mandatory** to pre-install wall ties and to make sure that the platform is never raised beyond the last wall tie point.
- 4- Unless authorized in writing by Hydro Mobile prior to installation, the platform should only be used on a mast whose height does not exceed 500' (152 m). For any configuration other than those described above, contact the distributor or the Hydro Mobile technical support team.

## Wall Ties (cont'd)

## Installation of the anchoring system

Before attaching masts to the building using the wall tie system, anchor fasteners or any other attachment must be installed on a solid component of the building structure. Concrete slabs, columns, steel beams, relief angles and other structural elements can be used provided they can sustain the tension / compression and shear force of the anchoring installation option chosen, as described below.

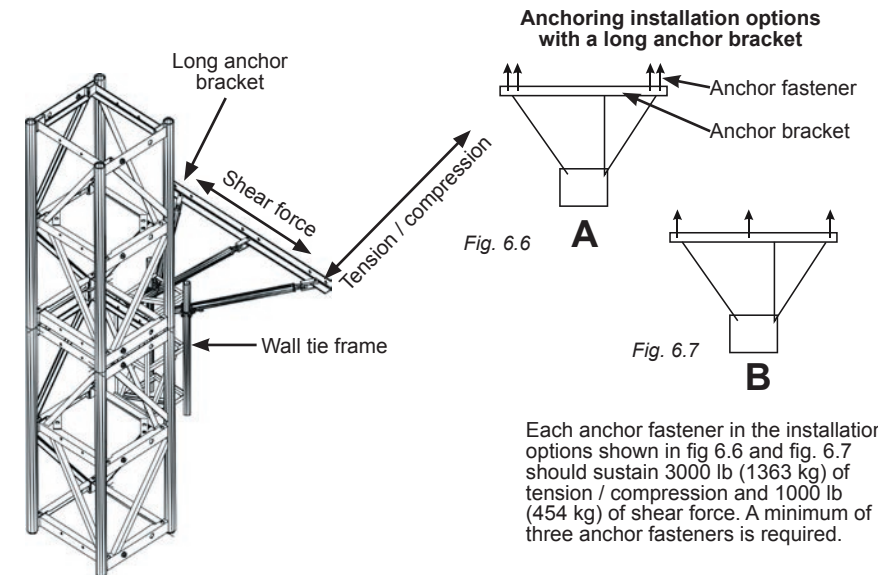


Fig. 6.5 Long anchor bracket

## Anchoring installation with a short anchor bracket

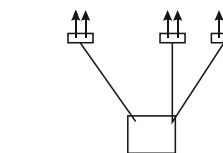


Fig. 6.8

Each anchor fastener in the installation option shown in fig. 6.8 should sustain 1500 lb (682 kg) of tension / compression and 500 lb (227 kg) of shear force. A minimum of six anchor fasteners is required.

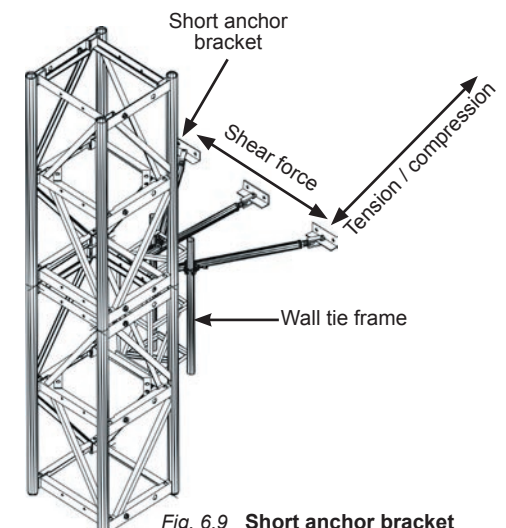
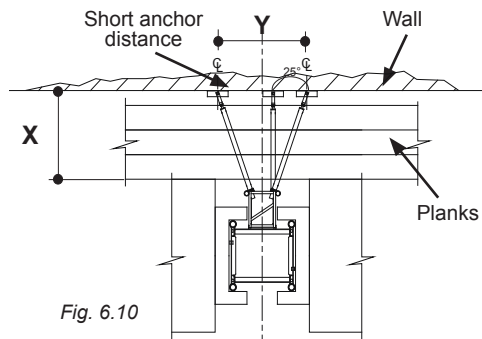


Fig. 6.9 Short anchor bracket

## Wall ties (cont'd)

## Installation of wallmounts

- 1- Align the wall tie frame holes with the ones on the mast (fig. 6.13). Bolt the wall tie frame to the mast using 1/2" x 1 1/2" GR8 bolts (4) and 1/2" GR8 nuts (4).
- 2- Choose the appropriate anchor system. Each anchor fastener must be capable of withstanding 3000 lb (1360 kg) of tension / compression per hole and 1000 lb (455 kg) of shear force per hole for a **long** anchor bracket and 1500 lb (680 kg) of tension / compression per hole and 500 lb (227 kg) of shear force per hole for a **short** anchor bracket.
- 3- Attach the anchor bracket to the structure.
- 4- Using the wallmount pin, attach the wallmount to the anchor bracket, with the adjustment rod still at least halfway inside the wallmount tube.
- 5- Attach a dual clamp to the vertical tube of the wall tie frame **below** the top bar and **above** the bottom bar (fig. 6.14). Make sure that the bolt is tightened properly.
- 6- Attach the wallmount to the dual clamp on the wall tie frame. Make sure that the bolt is tightened properly.
- 7- In a configuration using 3 planks or more, back or forward extensions, long outriggers or weather protection, attach additional dual clamps on the wallmount in front and behind the wall tie frame dual clamp previously installed (fig. 6.15). Make sure all bolts are tightened. Refer to the *Installation of dual clamps* procedure, on p. 39, for more information.
- 8- Adjust the length of the adjustment rod until the mast is plumb on both its front and side axis.
- 9- Repeat steps 3 through 8 for each wallmount.



Short anchor distance		
X in (cm)	Y in (cm)	Number of planks
8" (20.3 cm)	17" (43.2 cm)	—
16" (40.6 cm)	17" (43.2 cm)	1
26" (66 cm)	24" (61 cm)	2
36" (91.4 cm)	34" (86.4 cm)	3

Fig. 6.11

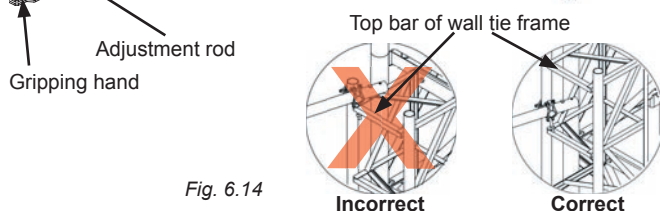
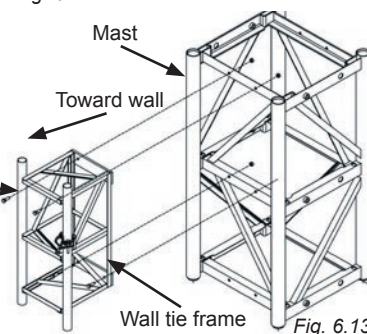


Fig. 6.14

## Wall ties (cont'd)

## Installation of dual clamps

In a configuration using 3 planks or more, back or forward extensions, long outriggers or weather protection, the tension / compression factor is highly increased. In such situations, it is **mandatory** to attach an additional dual clamp **inside** and **outside** the wall tie frame (see fig. 6.15).

- 1- Install the first dual clamp on the vertical tube of the wall tie frame below the top bar and above the bottom bar (fig. 6.14). Attach the wallmount to the dual clamp. Make sure that the distance between the welded stopper (or stop pin) and the dual clamp does not exceed 2" (5 cm) (fig. 6.16). Tighten the bolt.
- 2- Install additional dual clamps on the wallmount tube inside and outside the wall tie frame, making sure the distance between each dual clamp does not exceed 1/4" (0.6 cm) (fig. 6.15 and 6.16).

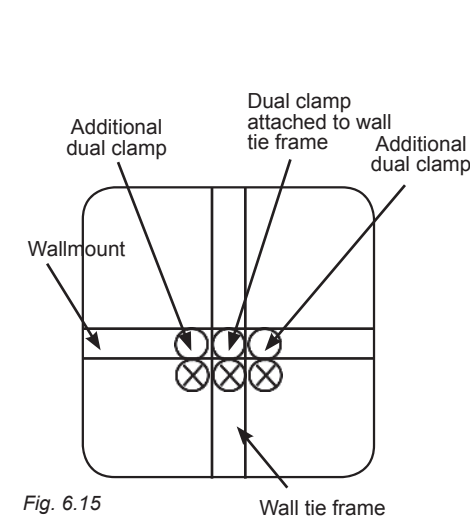


Fig. 6.15

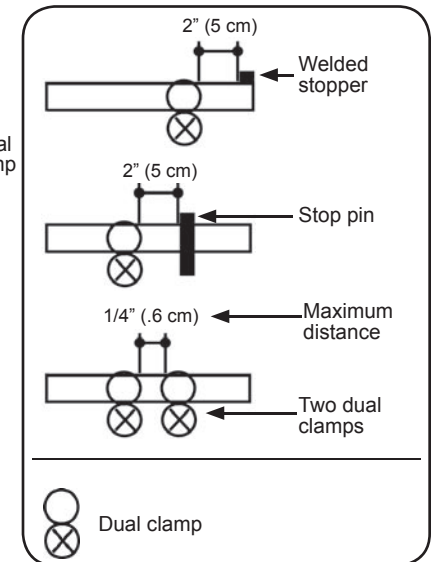


Fig. 6.16

**WARNING**

When using wallmounts without welded stoppers, use a bolt or a dual clamp as a stopper at the extremity of the wallmount tube attached to the wall tie frame.

**WARNING  
Wind**

- A mast climbing work platform system cannot be used when wind speed exceeds 35 mph (56 km/h).
- When using **weather protection**, a mast climbing work platform system cannot be used if wind speed exceeds 29 mph (46 km/h). It is **mandatory** to pre-install wall ties and to make sure that the platform is never raised beyond the last wall tie point.
- The platform cannot be left freestanding (on a mobile chassis only \*) when wind speed exceeds 29 mph (46 km/h).

\* Note: the mobile chassis is not yet available



## Load Capacities

**WARNING**

To ensure safety at all times on a mast climbing work platform system, bridges should not be loaded beyond their maximum rated weight capacities. In addition, to prevent a mast climbing work platform system from stalling because of an overload, maximum rated load capacities of the motorized unit(s) should be observed. Overloading a mast climbing work platform system could result in serious injury or death.

**Weights and measures – Equivalencies**  
 (IMPERIAL – METRIC)

Feet	Meters	Lb	Kg	Lb	Kg
5'	1,52 m	420 lb	190 kg	4000 lb	1818 kg
10'	3,04 m	500 lb	227 kg	4500 lb	2045 kg
15'	4,57 m	875 lb	397 kg	5000 lb	2273 kg
20'	6,1 m	1000 lb	454 kg	5500 lb	2500 kg
25'	7,62 m	1200 lb	544 kg	6000 lb	2727 kg
35'	10,67 m	1250 lb	567 kg	6500 lb	2953 kg
45'	13,72 m	1500 lb	682 kg	7875 lb	3572 kg
50'	15,2 m	1680 lb	762 kg	8400 lb	3810 kg
50' 5"	15,36 m	1875 lb	850 kg	8500 lb	3867 kg
65'	19,81 m	2000 lb	907 kg	9375 lb	4252 kg
115'	35,05 m	2250 lb	1020 kg	10,000 lb	4547 kg
		2500 lb	1136 kg	10,200 lb	4627 kg
		2625 lb	1190 kg	11,000 lb	5001 kg
		3000 lb	1364 kg	12,000 lb	5454 kg
		3400 lb	1542 kg		

Fig. 7.1

**NOTES**

- 1- The weight of planks and any additional accessory being used must be deducted from the load capacities shown in the following pages.
- 2- The cantilever bridges must have the same length on either side of the mast at all times (single mast configuration).
- 3- Each worker's weight (265 lb or 120 kg per worker) must be deducted from load capacities shown in the diagrams included in the following pages.
- 4- It is mandatory to have a minimum of two (2) workers for each of the configurations shown in the following pages or a maximum of one (1) worker per platform or bridge area of 15 linear feet (4.57 linear meters). The option allowing the greatest number of workers takes precedence over any other. However, the weight of each person working in a given area (bridge or platform) reduces the load capacity of that area.

## Load Capacities (cont'd)

## Single mast setup

Imperial measures illustrated below. For metric equivalencies, refer to the table in fig. 7.1 on p. 40.

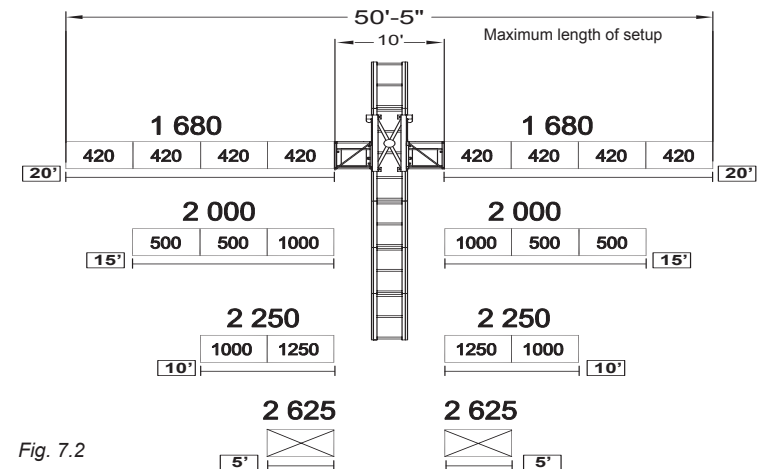


Fig. 7.2

## Twin mast setup

Imperial measures illustrated below. For metric equivalencies, refer to the table in fig. 7.1 on p. 40.

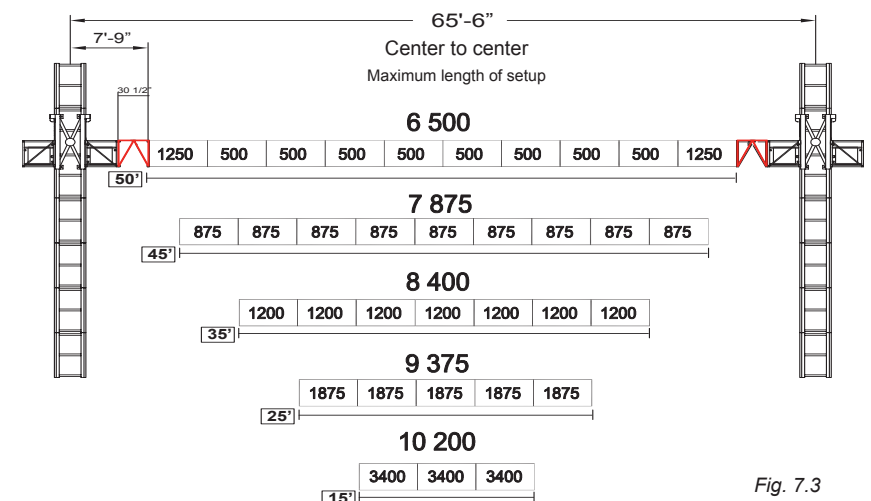


Fig. 7.3

**LEGEND**

- Bridge – 5' (1.5 m)
- Length of bridge setup

**NOTE:** The configuration illustrated in fig. 7.3 (above) requires the use of two motorized units and two optional twin mast adapters (shown in red).

**NOTE:** To ensure safety at all times, refer to notes and warning on p. 40 for more information on load capacities.

## Load Capacities (cont'd)

## Single mast setup

Imperial measures illustrated below. For metric equivalencies, refer to the table in fig. 7.1 on p. 40.

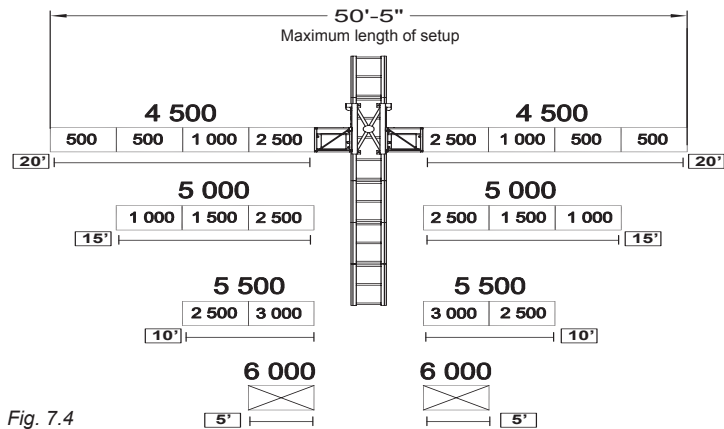


Fig. 7.4

## Twin mast setup

Imperial measures illustrated below. For metric equivalencies, refer to the table in fig. 7.1 on p. 40.

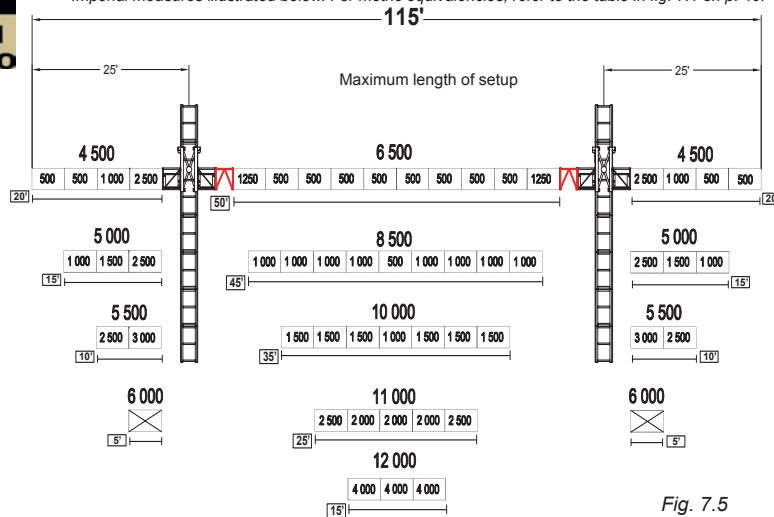


Fig. 7.5

## LEGEND

- Bridge – 5' (1.5 m)
- Length of bridge setup

**NOTE:** The configuration illustrated in fig. 7.5 (above) requires the use of two motorized units and two optional twin mast adapters (shown in red).

**NOTE:** To ensure safety at all times, refer to notes and warning on p. 40 for more information on load capacities.

## Load Capacities (cont'd)

## Split platform – Single mast setup

Imperial measures illustrated below. For metric equivalencies, refer to the table in fig. 7.1 on p. 40.

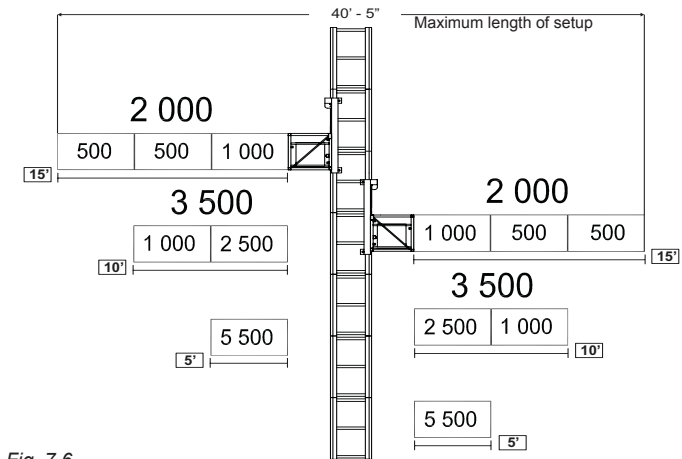


Fig. 7.6

## Split platform – Twin mast setup

Imperial measures illustrated below. For metric equivalencies, refer to the table in fig. 7.1 on p. 40.

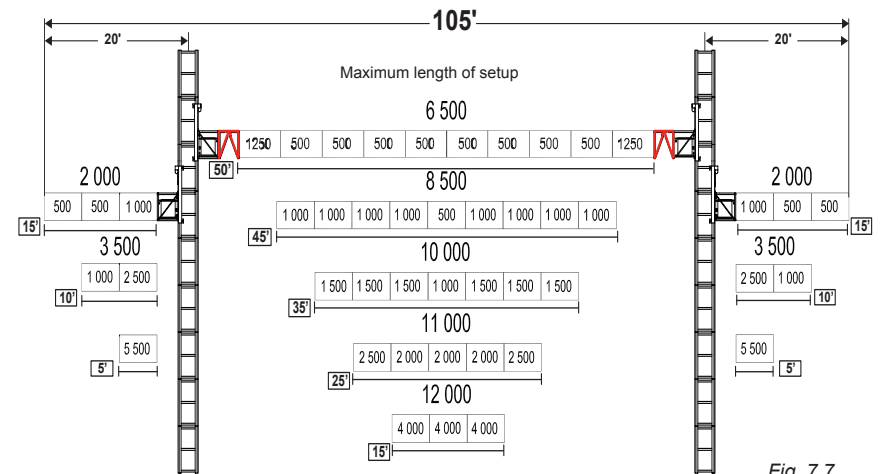


Fig. 7.7

## LEGEND

- Bridge – 5' (1.5 m)
- Length of bridge setup

**NOTE:** The configuration illustrated in fig. 7.7 (above) requires the use of two motorized units and two optional twin mast adapters (shown in red).

**NOTE:** To ensure safety at all times, refer to notes and warning on p. 40 for more information on load capacities.

## Load Capacities (cont'd)

## Forward / backward extension



Fig. 7.8



Maximum capacity of 500 lb (227 kg)

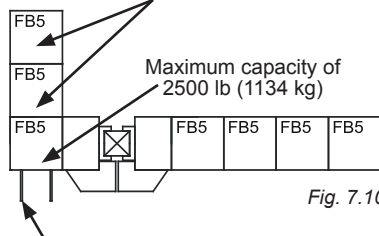


Fig. 7.10

Top outrigger with counterweight of 1500 lb (680 kg)

Maximum capacity of 500 lb (227 kg)

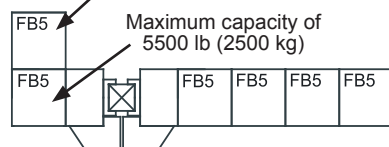


Fig. 7.9

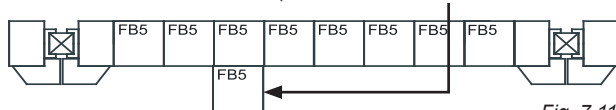
Maximum capacity of 250 lb (115 kg)  
(can be used to store a concrete saw)

Fig. 7.11

For the load capacities of the configurations of the F Series forward extension shown in fig. 7.9, 7.10 and 7.11, refer to the unlinked capacity charts illustrated in fig. 7.6 and 7.7, on p. 43. It is important to note that the weight of any additional bridge installed must be deducted from the load capacities illustrated above and in the previous pages. For any configuration other than those illustrated above and in the previous pages, contact the distributor or the Hydro Mobile support team.

## NOTES

- 1- The weight of planks and any additional accessory being used must be deducted from the load capacities shown above and in the previous pages.
- 2- The cantilever bridges must have the same length on either side of the mast at all times (single mast configuration).
- 3- Each worker's weight (265 lb or 120 kg per worker) must be deducted from load capacities shown in the diagrams included above and in the previous pages.
- 4- It is mandatory to have a minimum of two (2) workers for each of the configurations shown in the following pages or a maximum of one (1) worker per platform or bridge area of 15 linear feet (4.57 linear meters). The option allowing the greatest number of workers takes precedence over any other. However, the weight of each person working in a given area (bridge or platform) reduces the load capacity of that area.

## Outriggers

Standard 63" (1.6 m) outriggers can be installed at two levels on a bridge as plank support (fig. 8.1). Plank support outriggers must be installed every 5' (1.5 m). F Series outriggers are not designed to support the weight of material (fig. 8.2).

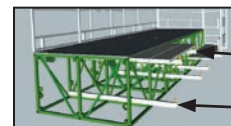


Fig. 8.1

Top outriggers  
Bottom outriggers

Fig. 8.2

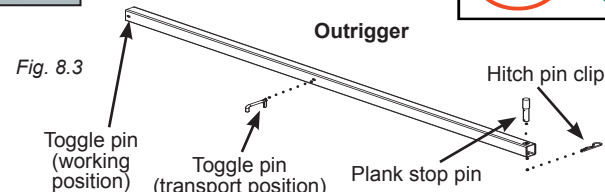


Fig. 8.3

## Outrigger

In a standard 0 to 3-plank configuration, each F Series outrigger has a maximum load capacity of 500 lb (227 kg).

Standard outriggers, used either at the top or bottom position, can be pulled out to a maximum of 30" (76.2 cm). Longer outriggers are available for special applications. For any other configuration using longer outriggers, contact the distributor or the Hydro Mobile technical support team.

## Installation

- 1- Remove the toggle pin and the plank stop pin (fig. 8.3) and slide the outrigger in the top or bottom outrigger pockets on the bridge (see fig. 3.1 of the *Bridges* section, on p. 22), leaving enough length to install planking. Replace the plank stop pin.
- 2- Once the planks are in place, push in the outrigger until the plank stop pin rests snugly against the planks.
- 3- Secure the outrigger in place by sliding in the toggle pin at one extremity (see the working position in fig. 8.3) and tightening both outrigger pocket bolts.



## WARNING

In a standard, recommended three-plank configuration, each outrigger has a maximum load capacity of 500 lb (227 kg).

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. 8.5

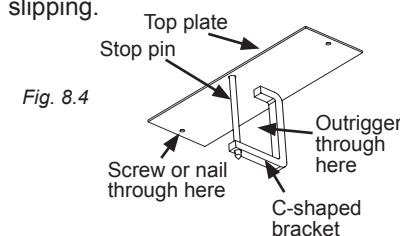


Fig. 8.4

## Installation

- 1- Remove the stop pin (fig. 8.4) 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. 8.5).



### Cross Boxes (optional)

Cross boxes are used to install auxiliary outriggers, as required when planking the inside corner of a forward extension or the recessed area in a wall.

#### Installation

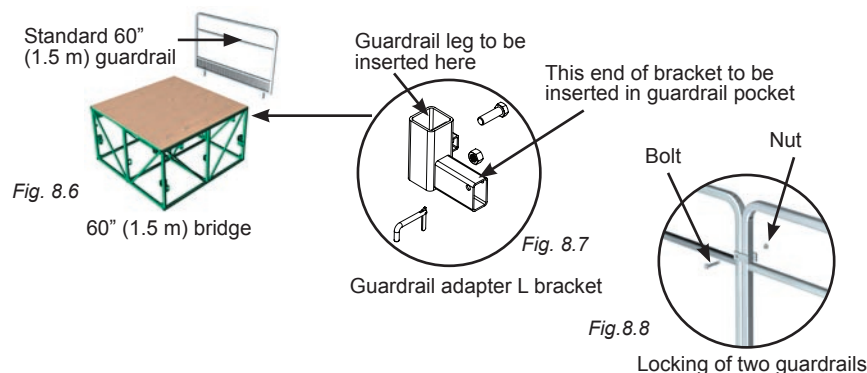
- 1- Remove the toggle pins and the plank stop pins from two outriggers.
- 2- Slide a cross box on the back and the front of each of the two outriggers. Replace the toggle pins and tighten both outrigger pocket bolts on each of the outriggers.
- 3- Slide the transversal outriggers through the cross boxes until they are halfway through.
- 4- Install a cross box on each transversal outrigger and extend each outrigger in position. Secure the transversal outriggers in place with toggle pins.
- 5- Slide auxiliary outriggers through the cross boxes on the transversal outriggers until they are in position. Secure them in place with toggle pins. Install a plank stop pin in each of the auxiliary outriggers.
- 6- Once the planks are in place, adjust the auxiliary outriggers until the plank stop pins rest snugly against the planks.
- 7- Secure the outriggers in place by tightening all the bolts on the cross boxes.

### Guardrails

Appropriate guardrails must be installed on each F Series bridge to ensure the safety of workers at all times.

#### Installation

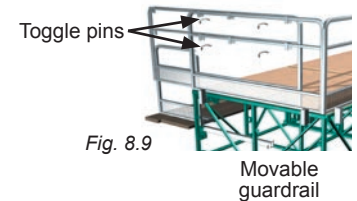
- 1- Slide a guardrail adapter L bracket (fig. 8.7) in each of the two guardrail pockets at the top of the bridge (see fig. 3.1 on p. 22 of the *Bridges* section) and secure them with toggle pins.
- 2- Insert the guardrail legs in the vertical part of the adapter brackets and tighten the bolts on the 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. 8.8).



### Guardrails (cont'd)

#### Movable Guardrails (optional)

To ensure the safety of workers in a more flexible way, movable guardrails may be installed on bridges. Follow the installation steps of a standard guardrail and secure the movable guardrail to the standard guardrail with toggle pins.



### Plank-End Guardrails

Plank-end guardrails must be installed at the ends of planking as fall protection. In a standard, recommended three-plank configuration, the opening must be closed by placing two plank-end guardrails **face to face**.

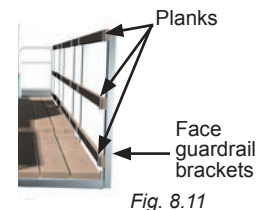


#### Installation

- 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 a standard, recommended three-plank configuration using two plank-end guardrails, make sure the first guardrail is installed **backwards**. Repeat steps 1 and 2 for the installation of the second guardrail.

### Face Guardrail Brackets (optional)

Face guardrail brackets must be installed when the distance between the end of planking (or deck, if not using plank) and the structure is greater than what local regulation allows or 6" (15 cm) (ex. recess in a wall, end of a building, etc.), the most stringent of conditions taking precedence over the others.



#### Installation

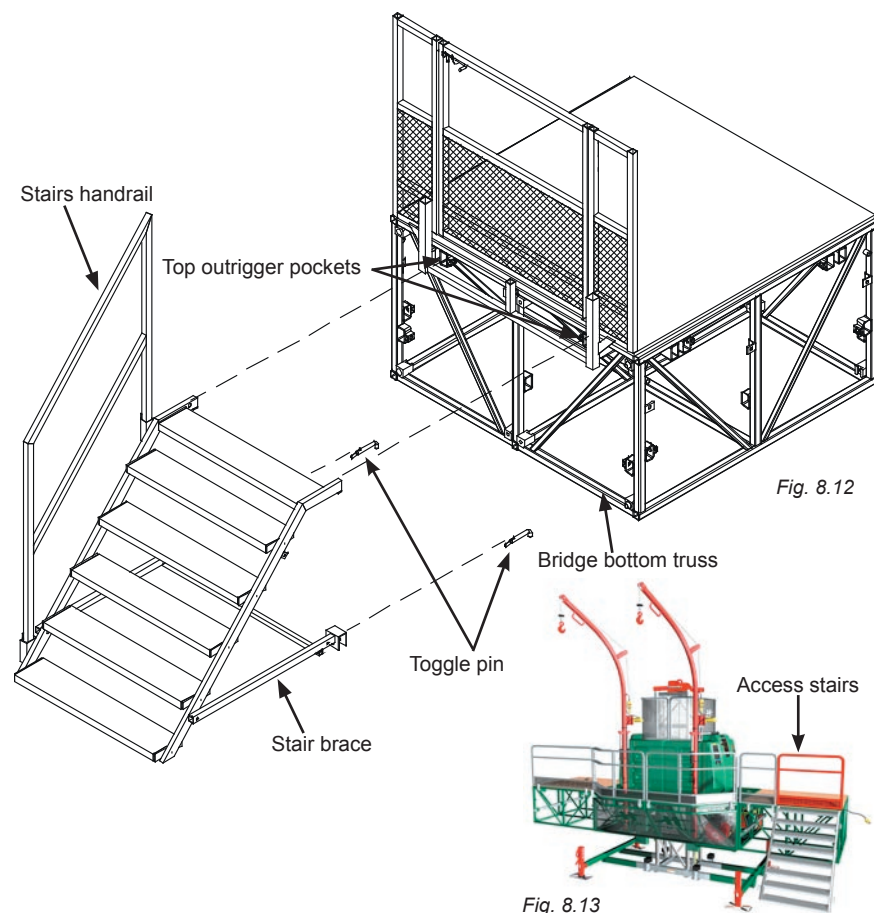
- 1- Remove the plank stop pin from the outrigger and slide in the face guardrail bracket inside the outrigger tube.
- 2- Secure in place by sliding the plank stop pin through the face guardrail bracket and the outrigger. Tighten all outrigger pocket bolts properly.
- 3- Repeat steps 1 and 2 for each outrigger required to secure the hazardous opening.
- 4- Insert planks in the hooks of each face guardrail bracket to cover the hazardous opening (fig. 8.11). Secure the planks in place with nails or screws.

### Access Stairs

When the motorized unit is at base pedestal level, workers may use the optional access stairs to reach the platform.

#### Installation

- 1- Install the guardrail door by sliding the guardrail legs in the guardrail pockets on the bridge. Secure the guardrail door with two toggle pins.
- 2- Slide the top part of the stairs into the top outrigger pockets. Secure in place by sliding in two toggle pins and tightening each outrigger pocket bolt.
- 3- Unfold the stair brace.
- 4- Secure the stair brace to the bottom truss of the bridge with two toggle pins.
- 5- Install the stairs handrail and secure in place with two toggle pins.



#### WARNING

Access stairs can only be used when the motorized unit is at base pedestal level.

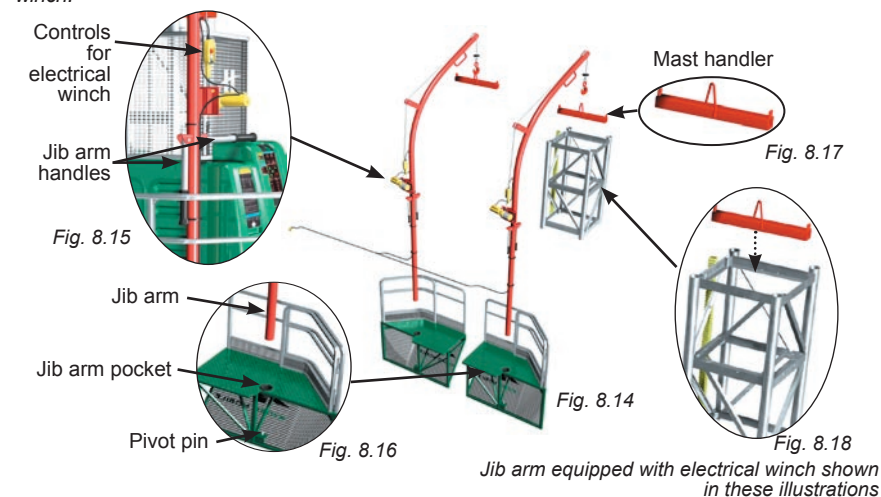
### Jib Arm (optional)

The optional F Series jib arm (for models F100, F200 and F300) is used to install or remove mast sections. The jib arm can be used with an interchangeable manual or electrical winch. With a maximum lifting capacity of 400 lb (182 kg), the jib arm must not be used to lift any material other than **one mast section at a time**. Furthermore, to make sure that mast sections are equally distributed at all times on either side of the mast and that the structure is not thrown out of balance, the use of **two jib arms** is **recommended**.

#### Installation

- 1- With the motorized unit at base pedestal level, lift and remove the cover plate of the jib arm pocket on the bridge link (fig. 8.16).
- 2- Slide the jib arm assembly into the jib arm pocket until it completely covers the pivot pin at the base of the jib arm pocket, on the angle bar (fig. 8.16).
- 3- Attach the mast handler to the cable hook at the upper end of the jib arm (fig. 8.17).
- 4- Insert the mast handler at a cross angle under the top bar of the mast section and raise the mast section with the jib arm on top of the bottom mast section. Bolt the mast section in place (see p. 35 of the *Masts and Wall Ties* section).
- 5- Remove the mast handler from the top of the mast section **before** raising the platform.
- 6- Repeat steps 4 and 5 for each mast section to be installed until the setup is complete. Make sure to install wall ties as required and prescribed. For more information about wall ties, refer to p. 36 of the *Masts and Wall Ties* section.
- 7- Install the mast head on top of the last mast section of the setup.
- 8- Once the setup is complete and the motorized unit has been brought back to base pedestal level, remove the mast handler and the jib arm.
- 9- Replace the cover plate on the jib arm pocket.

Note: The above instructions apply to jib arms equipped with either an electrical or a manual winch.



#### WARNING

The jib arm has a maximum lifting capacity of 400 lb (182 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** raising the platform.

## Transport and Storage

### Transport of the motorized unit

- 1- Loosen the bolt of the bottom limit switch bracket located on the half mast (bottom mast section) attached to the base pedestal (fig. 9.1) and lower the switch bracket all the way down.
- 2- Lower the motorized unit until it rests on the rubbers (4) mounted on the base pedestal (fig. 9.2 and 9.3).
- 3- Push all the outriggers into the bridges and lock them in place.
- 4- If the motorized unit was used in an unlinked configuration (model F300 only), make sure to replace the trolley link (see the instructions on p. 17 of the *Motorized Unit* section).
- 5- Make sure that the gasoline valve lever has been turned off (see the *Power Pack and Operating Components* section, p. 27) and disconnect the battery. On model F300, verify both power packs. It should be noted that the battery (or batteries) may have to be recharged before the motorized unit can be used again.
- 6- Remove the removable guardrail or secure it to prevent it from opening during transport.
- 7- Make sure the bridge link guardrails are secured.
- 8- Remove the access stairs.
- 9- On model F300, secure the bridge link doors for transport.
- 10- Make sure that both right and left plastic hood panels are secured with toggle pins.

### Storage of the motorized unit

- 1- Follow all the steps described in the transport procedure.
- 2- Before storing the motorized unit, make sure to place sufficient cribbing under the base pedestal to prevent freezing water from causing damages to the bottom of the structure.

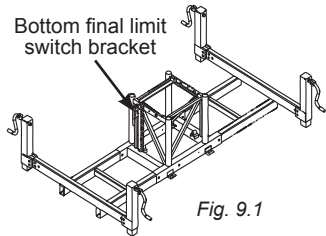


Fig. 9.1

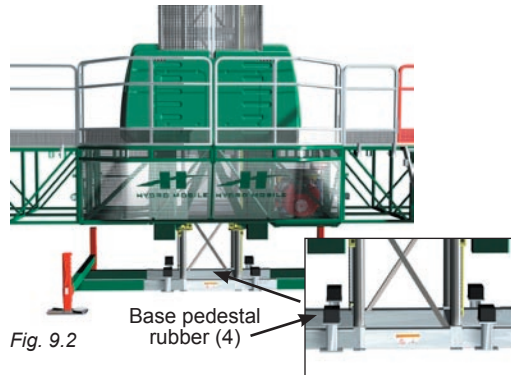


Fig. 9.2



Fig. 9.3



#### WARNING

Before transporting or storing a motorized unit, make sure that all gasoline levers have been turned off and that all batteries have been disconnected. When storing a motorized unit, there should be sufficient cribbing under the base pedestal to prevent freezing water from causing damages to the bottom of the structure.

## Maintenance

Proper maintenance and service will warrant safe, economical, and trouble-free operation of an F Series motorized unit (models F100, F200 and F300). The following pages include maintenance schedules and routine inspection procedures. While **daily** and **weekly** maintenance operations can be performed by a competent person, it is mandatory that any inspection or maintenance operation scheduled to be performed every **month**, every **four months** and every **year** be carried out by an **appropriately trained and competent authorized technician**.

Daily and weekly maintenance operations are only necessary when the motorized unit is in use. The owner is responsible for all other maintenance operations (monthly, every four months and yearly) and these should be carried out whether the motorized unit is in use or not. The **yearly** maintenance operations should be carried out in a **workshop**.

In order to ensure operational safety and avoid failures, the owner must make sure that all scheduled maintenance operations have been effectively and timely carried out according to the maintenance schedules included in this manual. Blank copies of the maintenance logs (daily, weekly, monthly) should be available on job sites at all times to be filled out when scheduled maintenance operations are carried out. Maintenance logs must be kept on record for warranty and safety purposes.

Tools required on job site	
Quantity	Description
1	3/4" open end wrench
1	7/8" open end wrench
1	1 1/2" open end wrench
1	15/16" open end wrench
1	banding cutter
1	2-lb hammer
1	1/2" drive 18" ratchet
1	1 1/2" x 1/2" drive socket
1	3/8" drive ratchet
1	15/16" x 3/8" drive deep socket
1	3/4" x 3/8" drive socket
2	4" x 20' (10 cm x 6 m) straps
1	3/4" cable choker

Fig. 9.4



#### WARNING

While **daily** and **weekly** maintenance operations can be performed by a competent person, it is mandatory that any inspection or maintenance operation scheduled to be performed every **month**, every **four months** and every **year** be carried out by an **appropriately trained and competent authorized technician**.





## DAILY MAINTENANCE LOG

(to be performed by a competent person daily or before every working shift)

IDENTIFICATION RECORD		
Model		
Motorized unit serial number		
Power pack serial number		
Company name		
Job site	Address	
	City	
	State/Province	
	Country	
	Zip/Postal Code	

Signature of competent person

Name of competent person  
(IN PRINT)

Date of inspection

Hours of operation displayed  
on counter

Comments





## DAILY MAINTENANCE LOG

(to be performed by a competent person daily or before every working shift)

Element	OK	Inspection / action
Base pedestal		Check the solidity and stability of the cribbing under the base pedestal.
		Check the stability of the jacks on the base pedestal extension.
Main trolley		Visually inspect all rollers for misalignment and excessive wear.
		Check the bolts on the top inside rollers and make sure that the shafts are tightly in place.
		Visually inspect the top final limit proximity switch: a red light indicates it is working properly.
		Visually inspect the top limit proximity switch: a red light will turn on when a metal object is placed in front of it.
		Check the bridge link door proximity switch (model F300 only).
		Check the hydraulic oil level. Replenish with Shell Naturelle HF-M biodegradable product code 407-214.
Power train		Visually inspect the pinions and make sure that they are clear of debris.
		Visually inspect the alignment of the pinions with the rack.
		Visually inspect all the rollers for misalignment and excessive wear.
Overspeed safety device		Visually inspect the overspeed safety device and make sure it is clear of debris and that there are no signs of obstruction.
		Make sure that the overspeed safety device is not in gear.
Honda engine		Perform the recommended daily maintenance on the 24 HP engine, as per the Honda engine owner's manual instructions.



## DAILY MAINTENANCE LOG

(to be performed by a competent person daily or before every working shift)

Element	OK	Inspection / action
Bridges		Check every bridge bolt and make sure it is tightened properly.
Power pack		Refill the gasoline tank.
		Check for leaks and wear on hydraulic fittings, hoses, pumps and on the engine(s).
Masts		Looking up from base pedestal level, make sure that the mast sections are well aligned and are not twisted.
		Visually check each mast bolt to make sure that they are all in place and properly secured.
Wall ties		Visually inspect each anchor fastener, anchor bolt, wallmount and dual clamp and make sure that each is properly fastened or tightened.
Operation		Make sure that the weather conditions and the wind speed will not affect the operation of the motorized unit.
		Make sure that the motorized unit and the plank outriggers clear all obstacles (balconies, etc.).
		Make sure that the installation and the operation are compliant with local rules and regulations.
		Make sure that the installation and the operation are compliant with the operator's manual.
		Make sure that there is, at all times, a competent and backup competent person to operate the unit.
Guardrails		Make sure that all the required guardrails are in place and properly secured.
		Make sure that there are no fall hazards.
Planking		Make sure that all the planking is properly secured to the motorized unit.
		Make sure that there are no fall hazards.



## WEEKLY MAINTENANCE LOG

(to be performed every week by a competent person)

IDENTIFICATION RECORD		
Model		
Motorized unit serial number		
Power pack serial number		
Company name		
Job site	Address	
	City	
	State/Province	
	Country	
	Zip/Postal Code	

Signature of competent person

Name of competent person  
(IN PRINT)

Date of inspection

Hours of operation displayed  
on counter

Comments



## WEEKLY MAINTENANCE LOG

(to be performed every week by a competent person)

Element	OK	Inspection / action
Scheduled maintenance		Make sure that all the steps included in the <b>daily</b> maintenance list have been carried out.
Honda engine		Perform the recommended <b>weekly</b> maintenance on the 24 HP engine, as per the Honda engine owner's manual instructions.
Power pack		Check for leaks and wear on hydraulic fittings, hoses, pumps and on the engine(s).
Masts		Visually inspect each rack and make sure that it is clear of debris.
		Make sure that all the racks are aligned properly.
		Visually inspect all the mast tubes for excessive wear or damage.
		Grease the rack(s) with Chevron open gear lubricant (part # A0560001-0000).





## MONTHLY MAINTENANCE LOG

(to be performed every month by an authorized technician)

IDENTIFICATION RECORD		
Model		
Motorized unit serial number		
Power pack serial number		
Company name		
Job site	Address	
	City	
	State/Province	
	Country	
	Zip/Postal Code	

Signature of authorized technician

Name of authorized technician  
(IN PRINT)

Date of inspection

Hours of operation displayed  
on counter

Comments



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## MONTHLY MAINTENANCE LOG

(to be performed every month by an authorized technician)

Element	OK	Inspection / action
Scheduled maintenance		Make sure that all the steps included in the <b>daily</b> and <b>weekly</b> maintenance lists have been carried out.
Honda engine		Perform the recommended <b>monthly</b> maintenance on the 24 HP engine, as per the Honda engine owner's manual instructions.

It is **mandatory** that any inspection or maintenance operation scheduled to be performed once a month be carried out by an appropriately trained and competent authorized technician.



## FOUR-MONTHLY MAINTENANCE LOG

(to be performed every four months by an authorized technician)

IDENTIFICATION RECORD		
Model		
Motorized unit serial number		
Power pack serial number		
Company name		
Job site	Address	
	City	
	State/Province	
	Country	
	Zip/Postal Code	

Signature of authorized technician

Name of authorized technician  
(IN PRINT)

Date of inspection

Hours of operation displayed  
on counter

Comments



## FOUR-MONTHLY MAINTENANCE LOG

(to be performed every four months by an authorized technician)

Element	OK	Inspection / action
Scheduled maintenance		Make sure that all the steps included in the <b>daily</b> , <b>weekly</b> and <b>monthly</b> maintenance lists have been carried out.
Honda engine		Perform the recommended maintenance scheduled for <b>every four or six months</b> on the 24 HP engine, as per the Honda engine owner's manual instructions.
Power pack		Change the hydraulic oil filter.
		Check the oil pressure on all hydraulic ports.
Power train		Check the oil level in all planetary reducers and refill if required; use SAE 80W/90 gear oil.

It is **mandatory** that any inspection or maintenance operation scheduled to be performed every four months be carried out by an appropriately trained and competent authorized technician.



## YEARLY MAINTENANCE LOG

(to be performed every year by an authorized technician)

IDENTIFICATION RECORD		
Model		
Motorized unit serial number		
Power pack serial number		
Company name		
Job site	Address	
	City	
	State/Province	
	Country	
	Zip/Postal Code	

Signature of authorized technician

Name of authorized technician  
(IN PRINT)

Date of inspection

Hours of operation displayed  
on counter

Comments



HYDRO MOBILE

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## YEARLY MAINTENANCE LOG

(to be performed every year by an authorized technician)

Element	OK	Inspection / action
Scheduled maintenance		Perform all the steps included in the <b>daily, weekly, monthly</b> and <b>four-monthly</b> maintenance lists.
Honda engine		Perform the recommended <b>yearly</b> maintenance on the 24 HP engine, as per the Honda engine owner's manual instructions.
Power pack		Change the hydraulic oil; use Biodegradable hydraulic oil Shell Naturelle HF-MJ, code 407-214.
		Inspect the structure for any welding defects, damaged parts and excessive rust or corrosion.
		Clean the oil cooler.
		Check the battery and the charging system.
Base pedestal and base pedestal extension		Inspect the structure for any welding defects, damaged parts and excessive rust or corrosion.
Main trolley		Inspect all the rollers for misalignment and excessive wear.
		Check the bearings and the retaining rings.

It is **mandatory** that any inspection or maintenance operation scheduled to be performed every year be carried out by an appropriately trained and competent authorized technician.



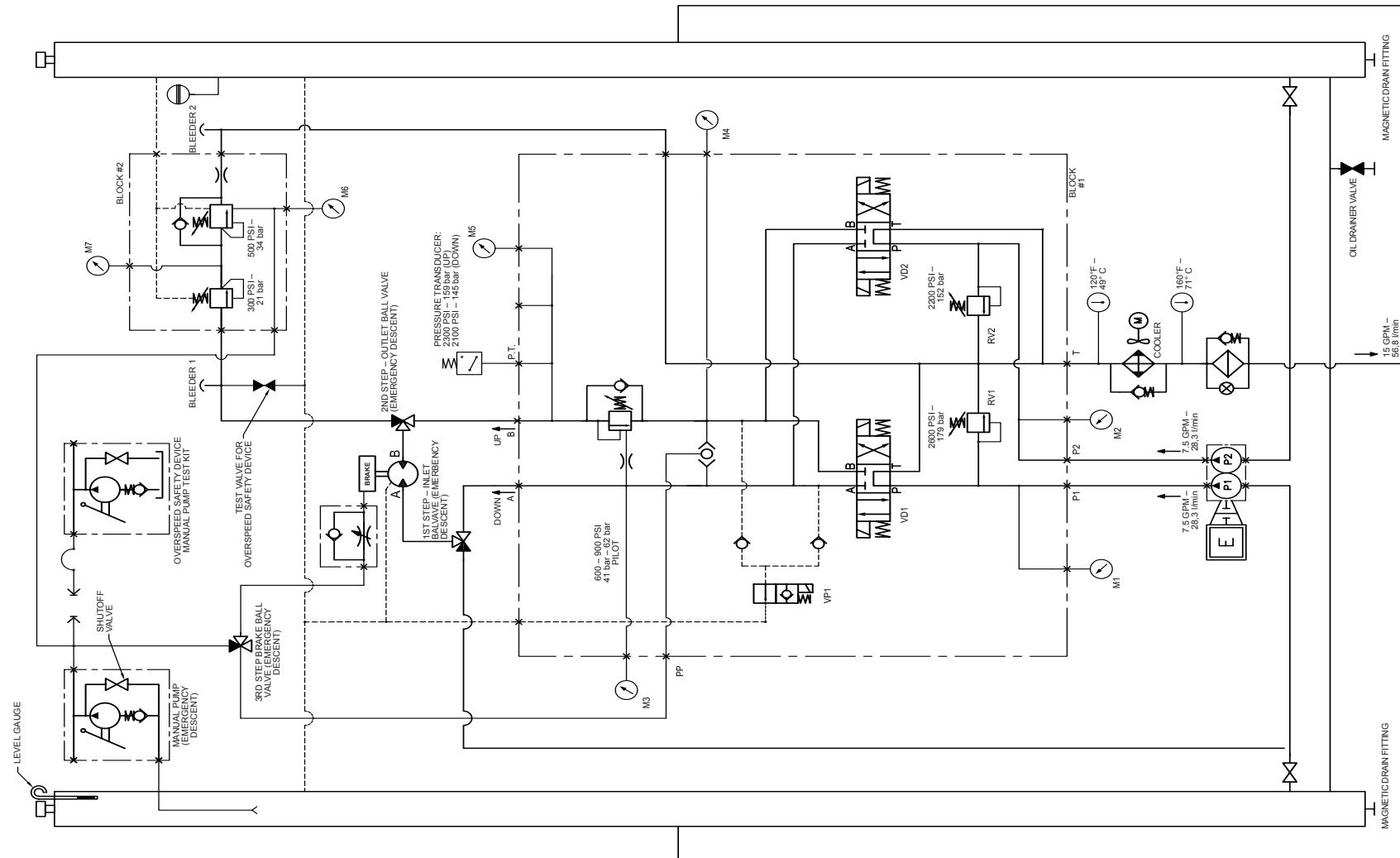
## YEARLY MAINTENANCE LOG

(to be performed every year by an authorized technician)

Element	OK	Inspection / action
Power train		Check all the planetary reducers and make sure that all fixing and connection bolts on the drive units are tightened properly.
		Change the planetary reducer gear oil; use Sunoco Challenge GBP 220; <b>do not use in planetary reducer brake</b> ; check for any leaking seals and replace them if required.
		Change the planetary reducer brake oil; use Tribospec TDH-W 32; <b>do not use in planetary reducer gear box</b> ; check for any leaking seals and replace them if required.
		Inspect all the rollers for misalignment and excessive wear.
		Check the bearings and the retaining rings.
		Inspect all the pinions for excessive wear.
		Adjust the alignment of the pinions with the rack.
		Align and adjust the gear-rack spacing.
		Inspect the structure for any welding defects, damaged parts and excessive rust or corrosion.
Control panel		Check all the electrical cables and plugs for wear and make sure that they are free of any imperfection; spray all the connections with Dielectric grease.
Overspeed safety device		Perform a drop test to ensure that the overspeed safety device is working properly.
Main frame		Inspect the structure for any welding defects, damaged parts and excessive rust or corrosion.
Bridges		Inspect all the bridges for welding defects, damaged parts and excessive rust or corrosion.
Masts		Inspect all the racks for excessive wear.
		Inspect the mast sections for any welding defects, damaged parts and excessive rust or corrosion.
Wall ties		Inspect the wall ties for any welding defects, damaged parts and excessive rust or corrosion.

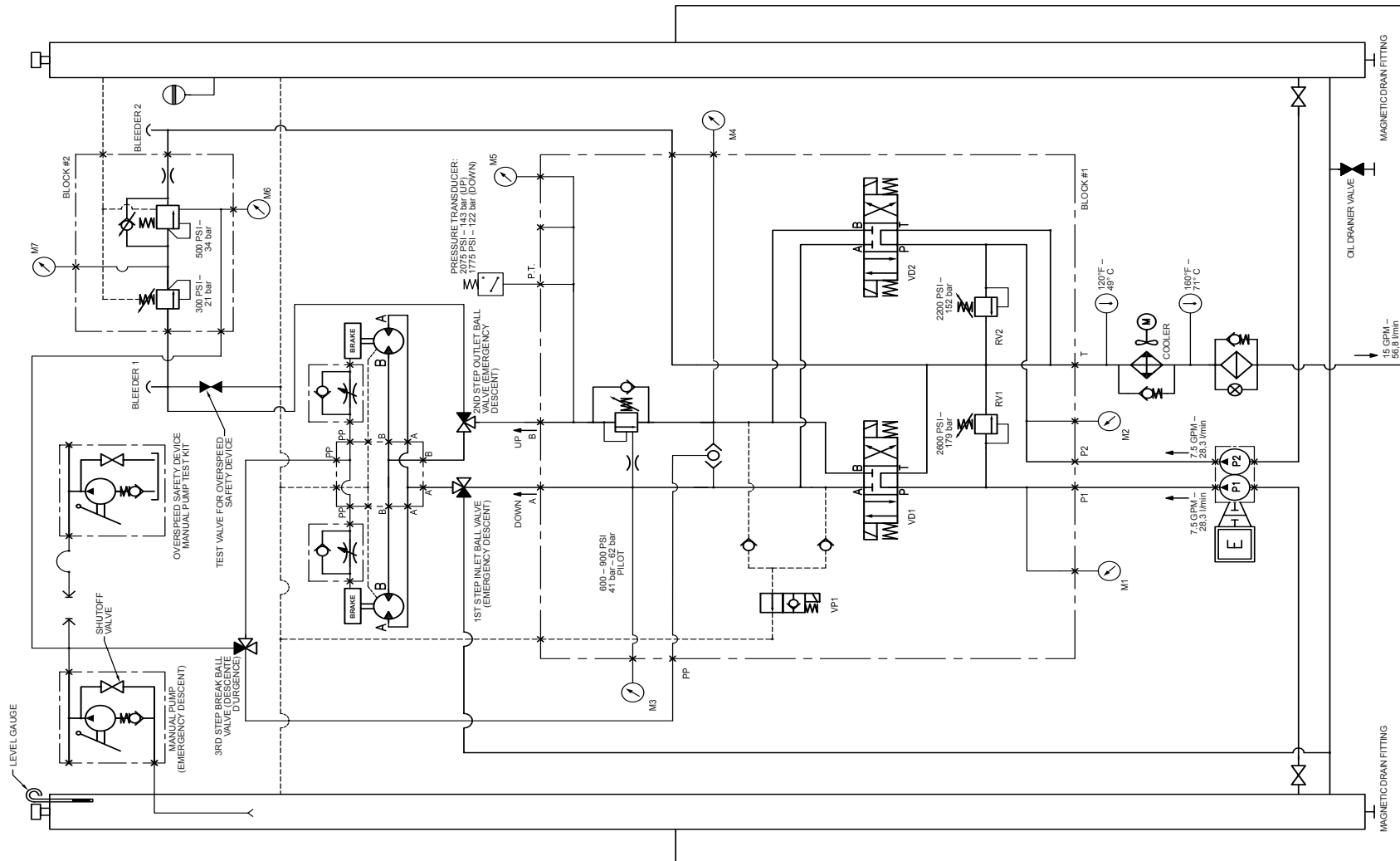
It is **mandatory** that any inspection or maintenance operation scheduled to be performed every year be carried out by an appropriately trained and competent authorized technician.

## Hydraulic Diagram – Model F100



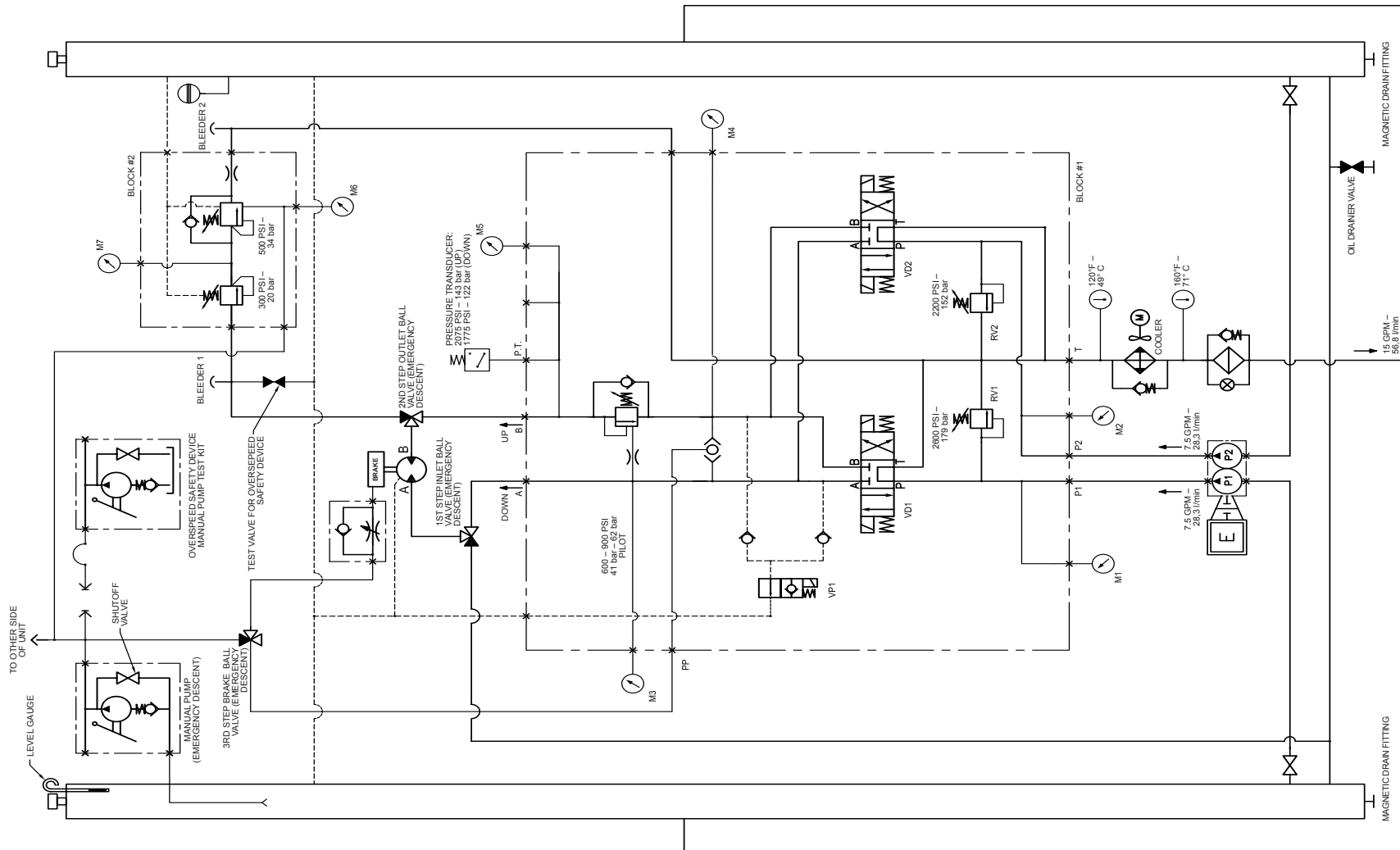
### Hydraulic Diagram - Model F100

## Hydraulic Diagram - Model F200



### Hydraulic Diagram - Model F200

### Hydraulic Diagram - Model F300



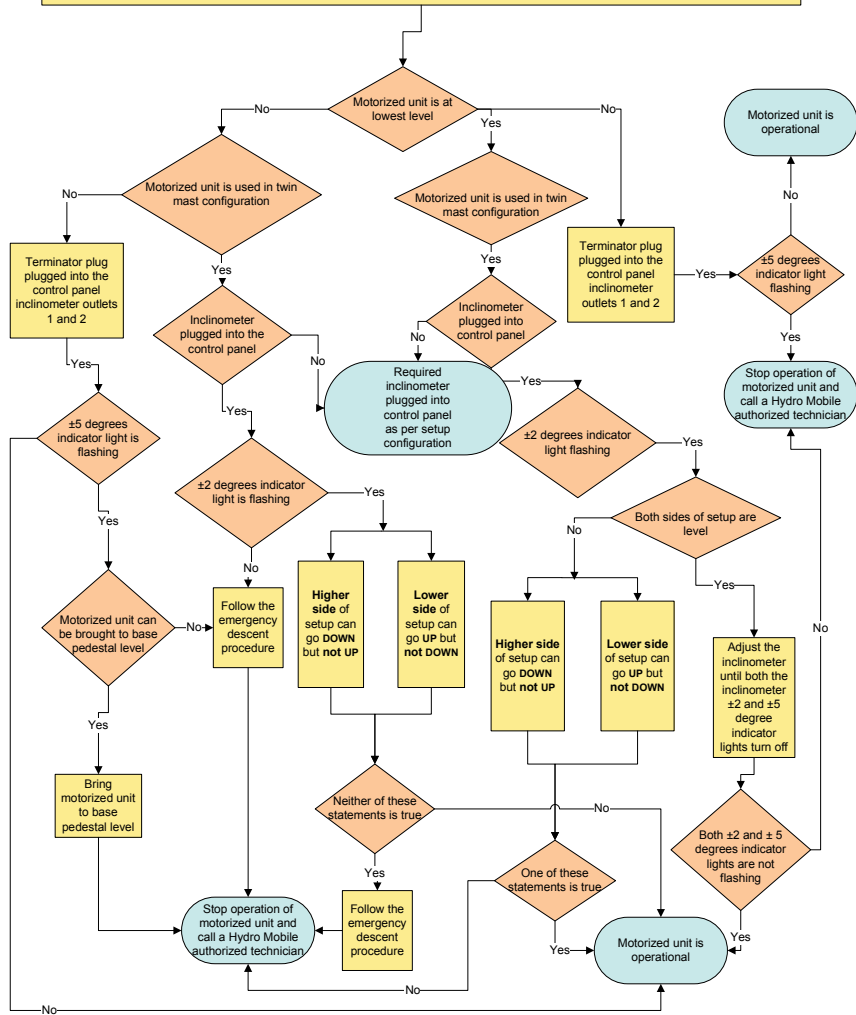
### Hydraulic Diagram - Model F300



## Troubleshooting and Operating Procedures

A – Inclinator  $\pm 5$  degrees indicator light troubleshooting procedure

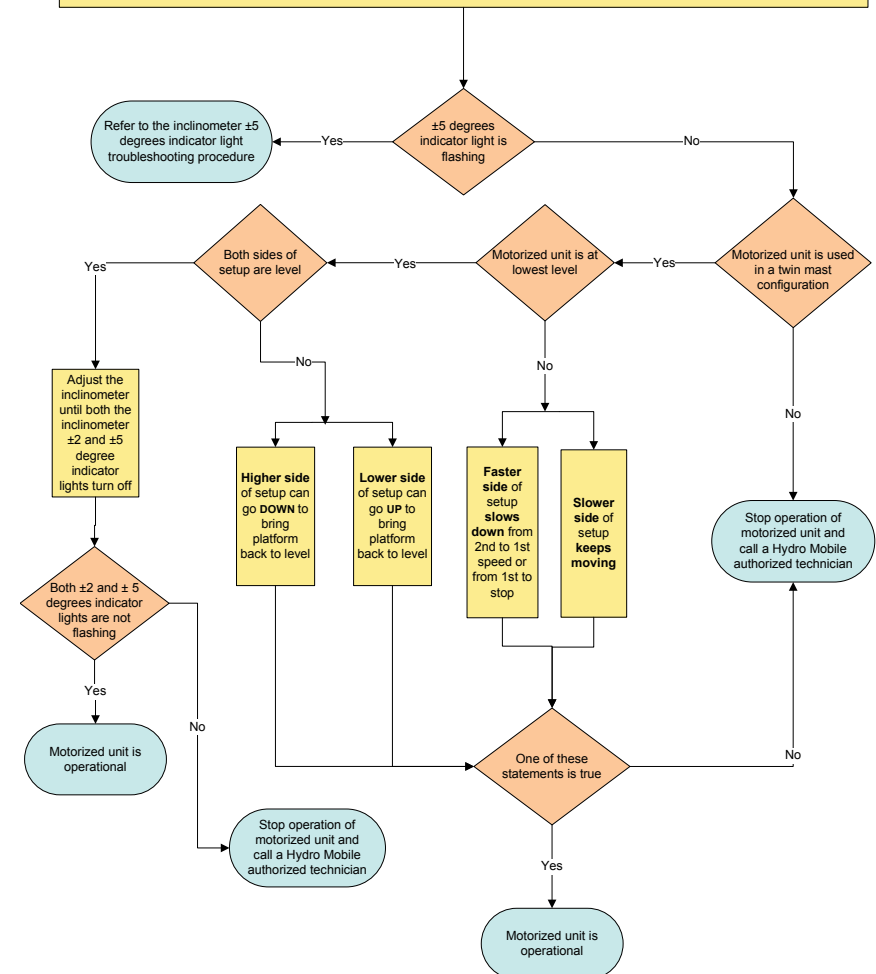
**EVENT:** The inclinometer  $\pm 5$  degrees indicator light is flashing **slowly** (once / second) on the control panel.  
**DESCRIPTION:** This indicates a problem with the inclinometer plugged into the #1 inclinometer outlet on the control panel.  
**EVENT:** The inclinometer  $\pm 5$  degrees lights is flashing **quickly** (twice / second) on the control panel.  
**DESCRIPTION:** This indicates a problem with the inclinometer plugged into the #2 inclinometer outlet on the control panel.



## Troubleshooting and Operating Procedures

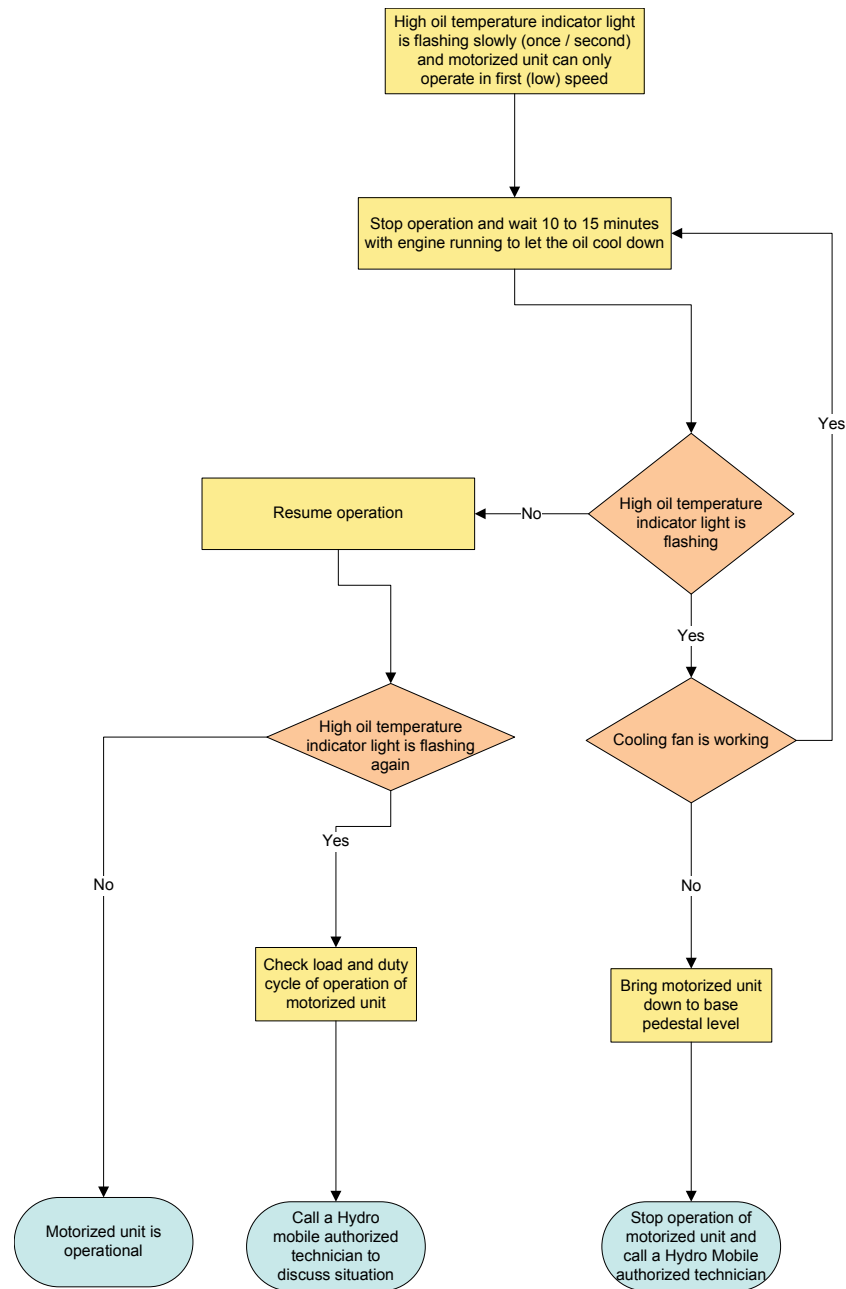
B – Inclinator  $\pm 2$  degrees indicator light troubleshooting procedure

**EVENT:** The inclinometer  $\pm 2$  degrees indicator light is flashing **slowly** (once / second) on the control panel.  
**DESCRIPTION:** This indicates a problem with the inclinometer plugged into the #1 inclinometer outlet on the control panel.  
**EVENT:** The inclinometer  $\pm 2$  degrees lights is flashing **quickly** (twice / second) on the control panel.  
**DESCRIPTION:** This indicates a problem with the inclinometer plugged into the #2 inclinometer outlet on the control panel.



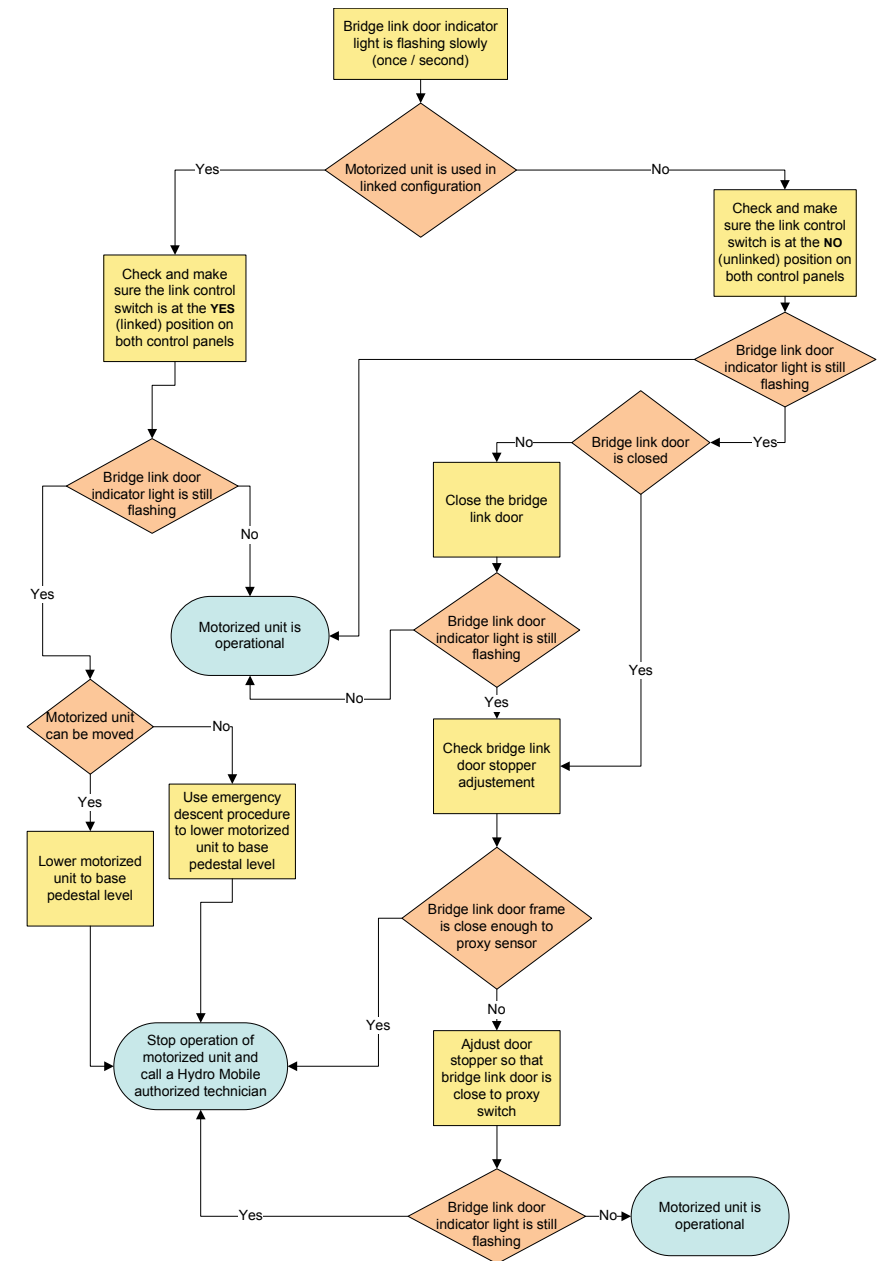
## Troubleshooting and Operating Procedures

## C – High oil temperature indicator light troubleshooting procedure



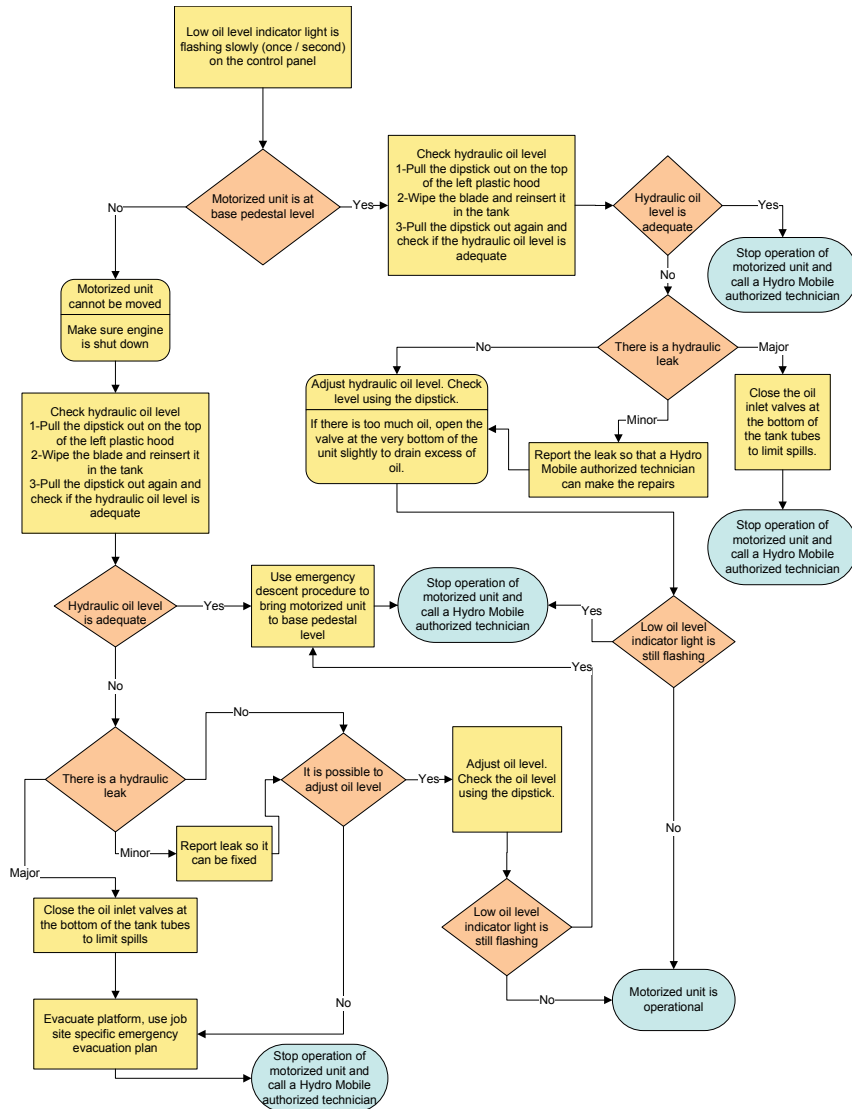
## Troubleshooting and Operating Procedures

## D – Bridge link door indicator light troubleshooting procedure (F300 only)



## Troubleshooting and Operating Procedures

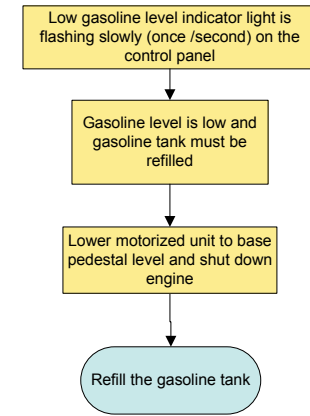
## E – Low oil level indicator light troubleshooting procedure



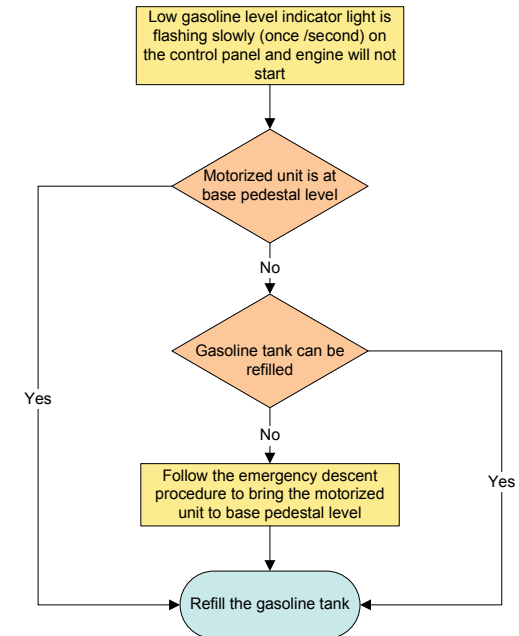
## Troubleshooting and Operating Procedures

## F – Low gasoline level indicator light troubleshooting procedure

1

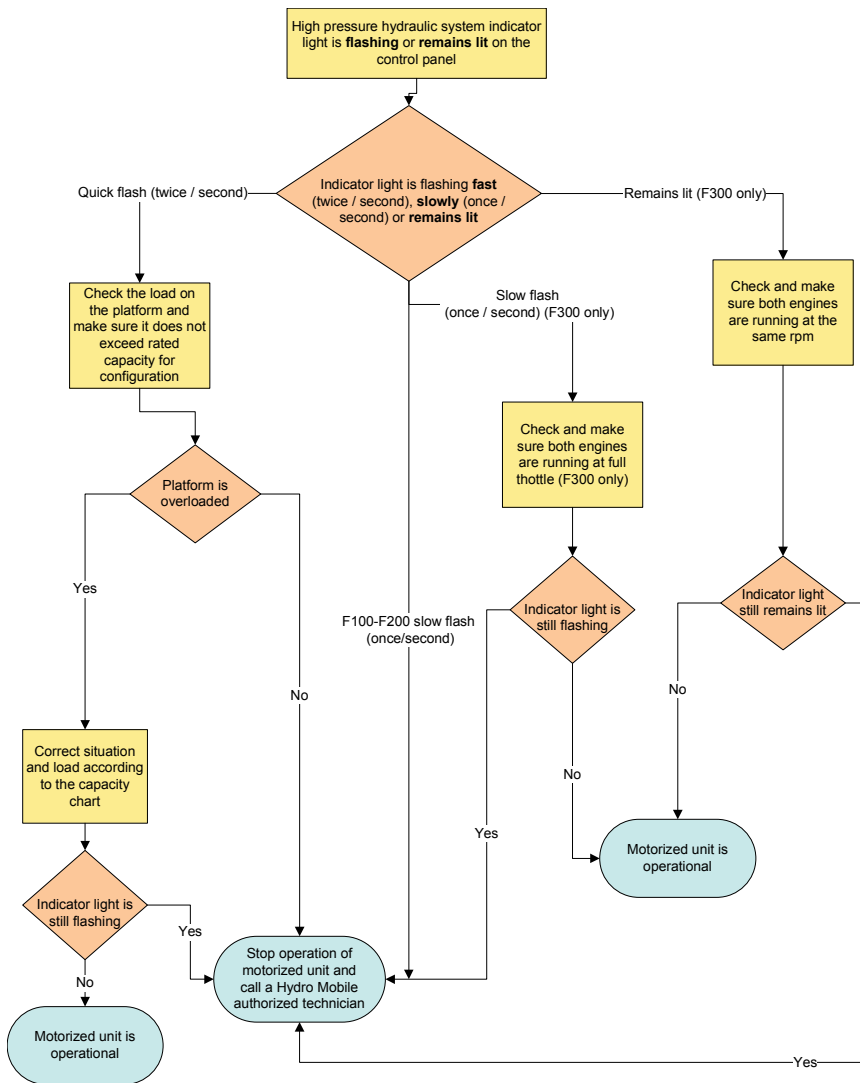


2



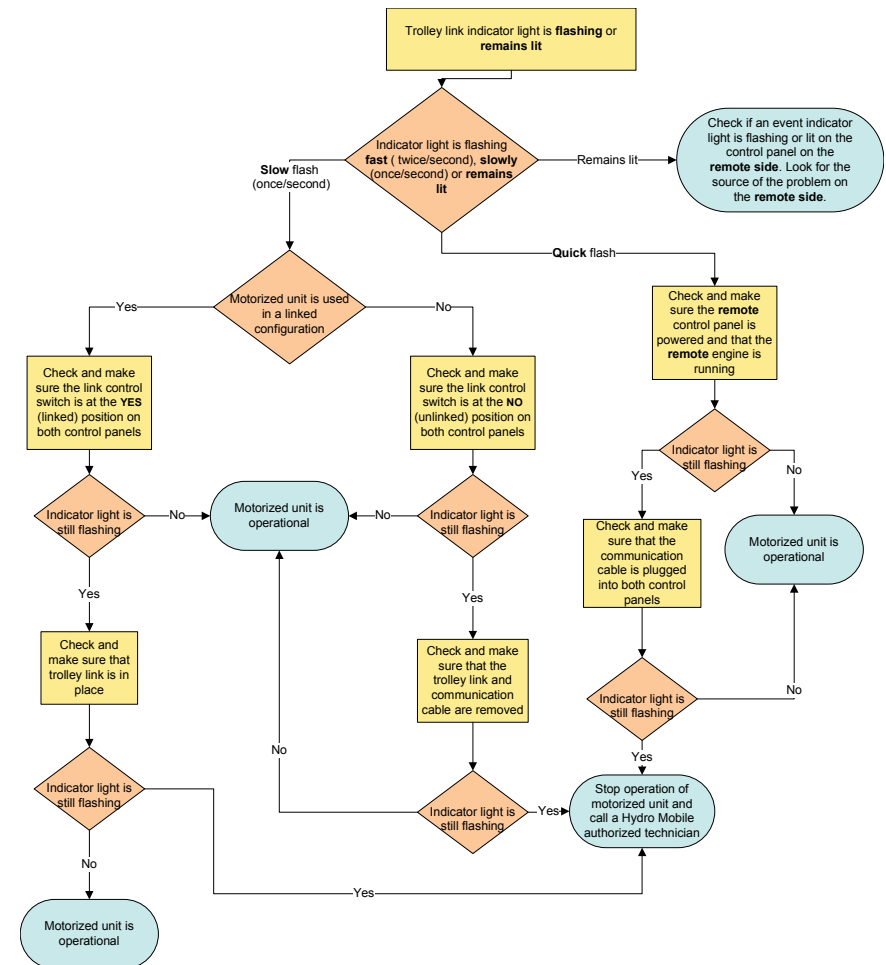
## Troubleshooting and Operating Procedures

## G – High pressure hydraulic system troubleshooting procedure



## Troubleshooting and Operating Procedures

## H – Trolley link indicator light troubleshooting procedure (F300 only)

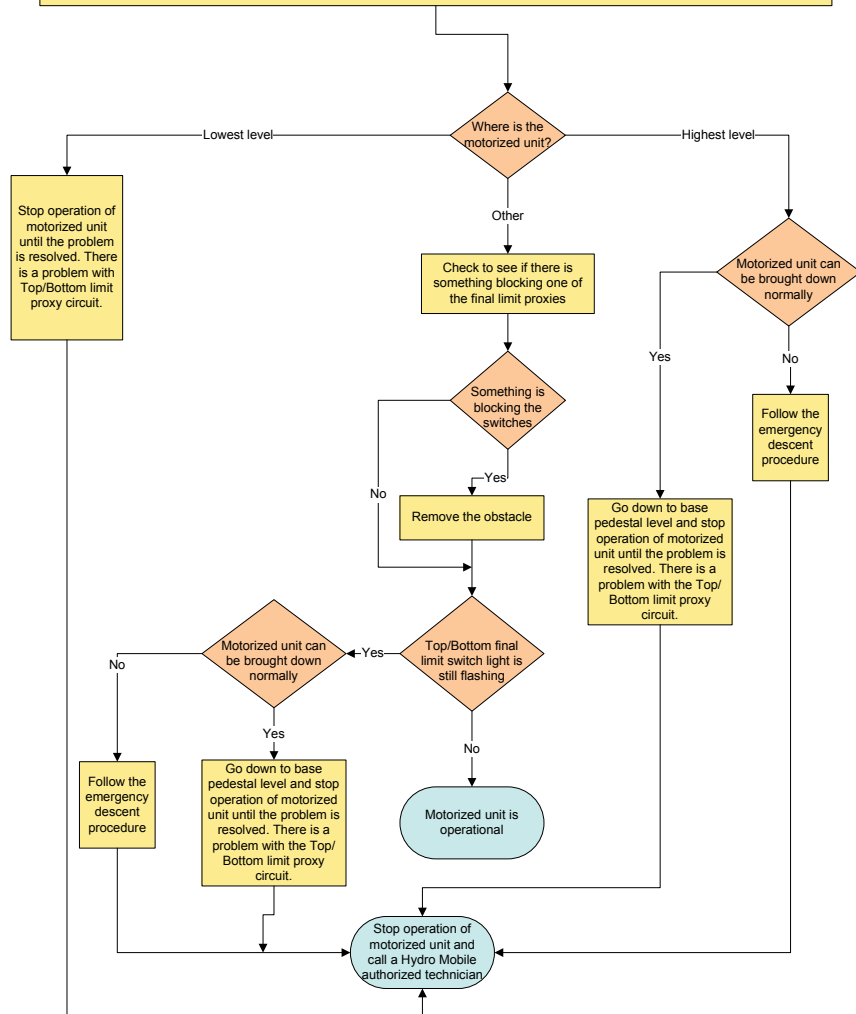




## Troubleshooting and Operating Procedures

### I – Top/bottom final limit indicator light troubleshooting procedure

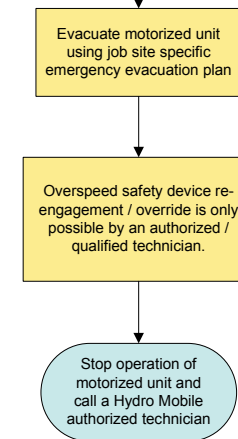
**EVENT:** Top/Bottom final limit indicator light is flashing **slowly** (once / second) on the control panel.  
**DESCRIPTION:** This indicates the warning is related to the bottom final limit.  
**EVENT:** Top/Bottom final limit indicator light is flashing **quickly** (twice / second) on the control panel.  
**DESCRIPTION:** This indicates the warning is related to the top final limit.



## Troubleshooting and Operating Procedures

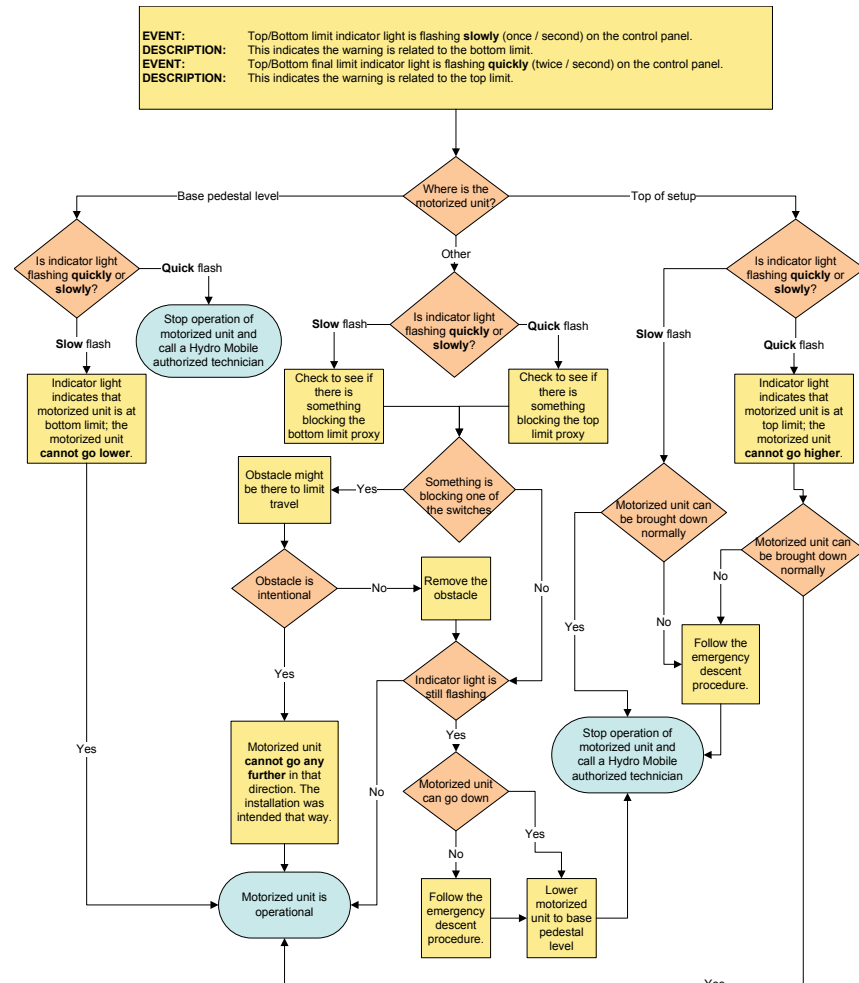
### J – Overspeed safety device troubleshooting procedure (F300 only)

The overspeed safety device warning light is flashing on the control panel and the engine on the same side where the overspeed safety device has engaged should shut down automatically  
**EVENT:** The overspeed safety device warning light is flashing **slowly** (once/second)  
**DESCRIPTION:** This warning indicates that the **local** (1) overspeed safety device is engaged  
**EVENT:** The overspeed safety device warning light is flashing **quickly** (twice/second)  
**DESCRIPTION:** This warning indicates that the **remote** (2) overspeed safety device is engaged (**model F200 only**)



## Troubleshooting and Operating Procedures

### K – Top/bottom limit indicator light troubleshooting procedure



## Troubleshooting and Operating Procedures

### L – Emergency descent indicator light troubleshooting procedure

