F Series Operator's Manual

Models F1017 – F1033

Call us for information:
1-888-484-9376 (US)
(toll free in the United States)
(450) 589-8100 (Canada)
+33.6.84.77.53.16 (Europe)

A0680002-0000
F_OpMan_v30_EN

Acknowledgements:

This manual was produced by Hydro Mobile Inc. on Adobe® InDesign® version 3.0 for Windows.

Drawings were prepared using Autodesk® Mechanical Desktop® 6.0 and Autodesk® 3D Studio Viz® 3.0.

This Hydro Mobile Inc. product is covered and protected by patents in Canada, United States of America and Europe.

United States: 4809814
Canada: 1304109
Europe: 0335311

APPAVE certification: 0077-760C-4104-10-03 (2003)

Created by:

Sylvain Jean and **Patrick Fournier**
Project Manager R&D Department

Gabriel Daigle
Manager Technical Support

Stéphane Béliveau and **Daryl Grobe**
Technical Support Specialists

Sylvie Beaudoin
Technical Writing

Hydro Mobile Inc.
125 de l'Industrie
L'Assomption, Quebec, Canada
J5W 2T9

Revision List

Date	Description
Dec 2001 v1.0	First edition of Operator's manual
Jun 2003 v2.0	Major overall revision and additions; APPAVE certification
Jan 2006 v3.0	Major overall revision and additions

NOTE
All assembly and operation instructions located on motorized units and bridges take precedence over information contained in this manual.

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.

General Information

Model	F1017G-K	17' (5.2 m)/min motorized unit
	F1033G-K	33' (10 m)/min motorized unit
Motorized unit serial number		
Power pack serial number (no. 1)		
Power pack serial number (no. 2)		
Manufacturing date		

HYDRO MOBILE

www.hydro-mobile.com

Introduction

Dear owner or user:

Thank you for investing in a Hydro Mobile F Series mast climbing work platform system (models F1017 and F1033). The design of this new motorized unit reflects 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.

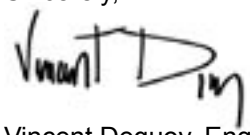
Furthermore, please be advised that this motorized unit and its operator's manual have been designed in conjunction with US ANSI / SIA A92.9-1993 standards, Federal Occupational Safety and Health Administration Standards OSHA 29CFR1926 subpart L, as well as applicable State and local regulation; with 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 provided in this manual. It is also advised to refer to the Honda 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 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

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.

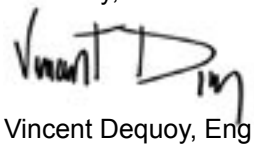
This warranty shall not apply to component parts or accessories of products not manufactured by Hydro Mobile and which carry the warranty of the manufacturer thereof or to normal maintenance (such as engine tune-up) or any part necessary to perform such maintenance. Hydro Mobile offers no other warranty,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

Table of Contents

Motorized Unit Overview

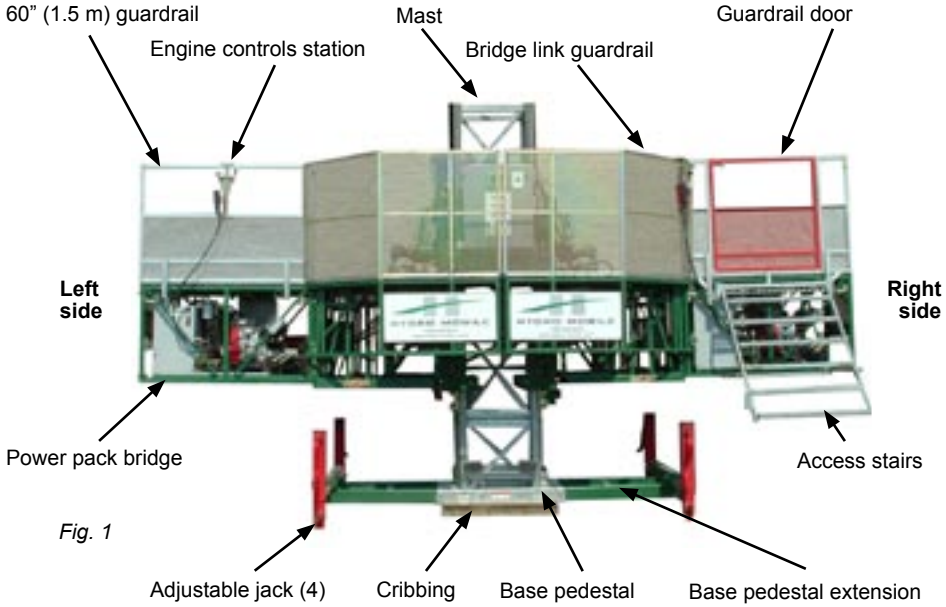


Fig. 1

Motorized unit – Back view

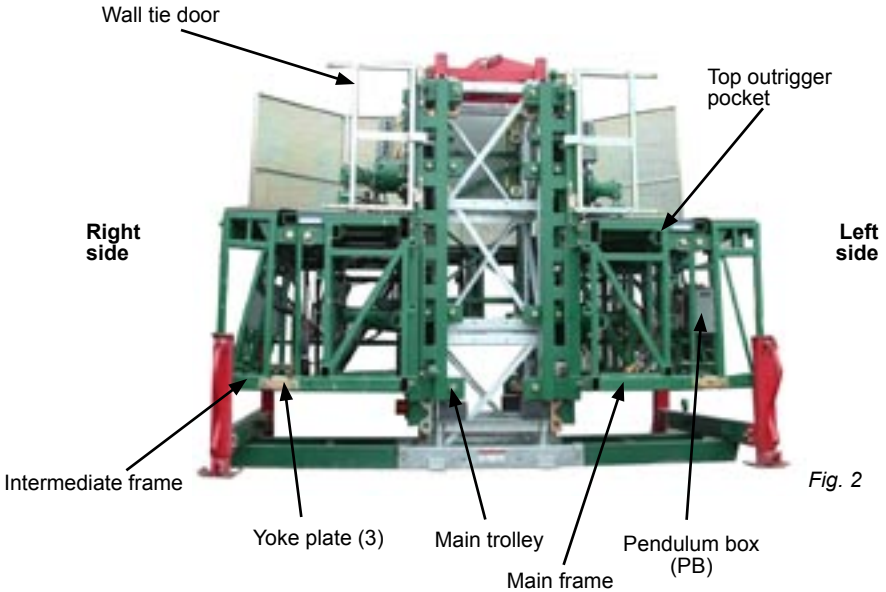


Fig. 2

Motorized unit – Front view

Motorized Unit Overview (cont’d)

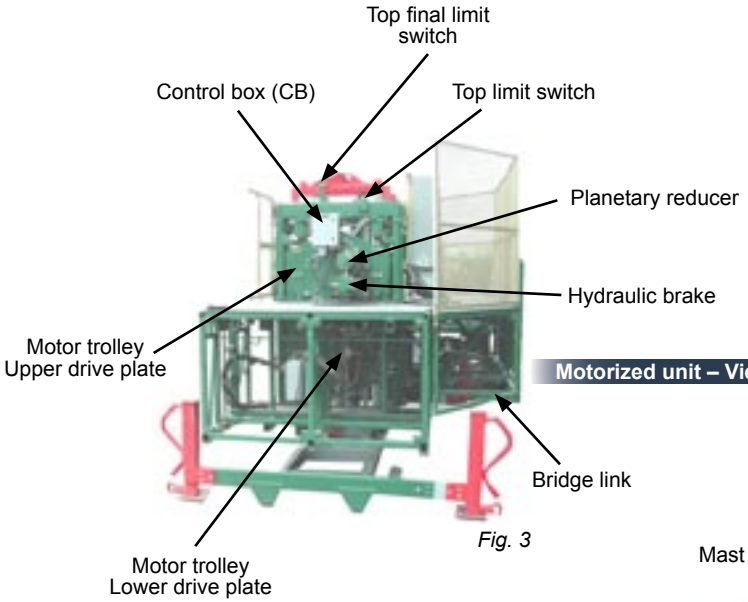


Fig. 3

Motorized unit – View from left side

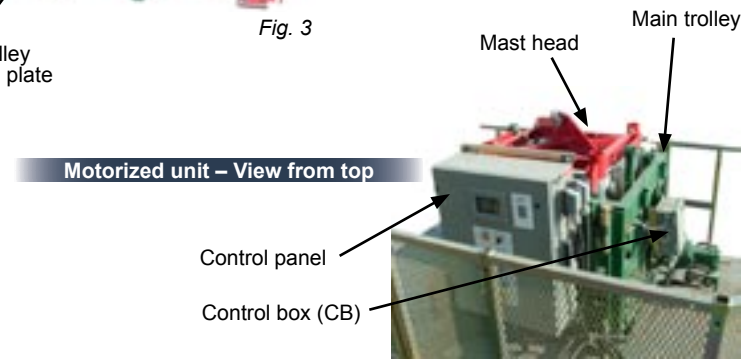


Fig. 4

Motorized unit – View from top

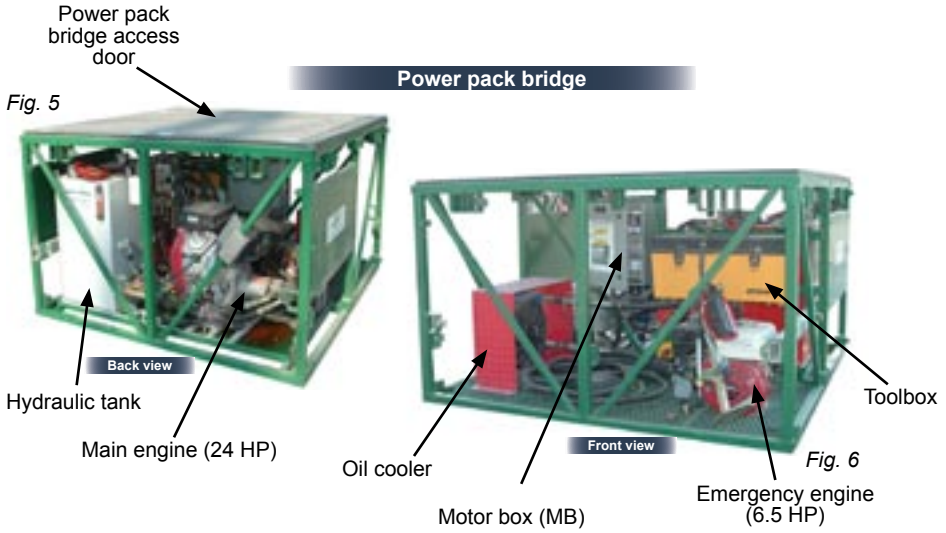


Fig. 5

Power pack bridge

Fig. 6

Motorized Unit Overview (cont'd)

Motorized Unit Specifications		
Description	**F1033**	**F1017**
Maximum load capacity	12 000 lb (5443 kg)	12 000 lb (5443 kg)
Number of power packs	2	1
Vertical speed	33 ft (10 m) / min	17 ft (5 m) / min
Weight of unit	9500 lb (4309 kg)	8500 lb (3856 kg)

Engine Specifications (applicable to F1017 and F1033)		
	Main engine	**Emergency engine**
Model	Honda GX670	Honda GX200
Maximum power	24 HP @ 3600 rpm	6.5 HP @ 3600 rpm
Spark plug	ZGR5A (NGK), J16CR-U (DENSO)	BPR6ES (NGK), W10EPR-U (DENSO)
Oil type	SAE 10W-30	SAE 10W-30
Fuel tank capacity	14 US gal (53 l)	0.95 US gal (3.6 l)
Oil capacity	1.48 US qt (1.40 l)	0.63 US qt (0.60 l)
For any other information regarding the use and the maintenance of Honda engines, refer to the Honda User's manual		

Fig. 7

Main Hydraulic Specifications (applicable to F1017 and F1033)	
Component	**Specifications**
Double gear pump	2 x 7.25 US GPM (27.44 l)
Planetary reducer oil	SAE 80W-90
Hydraulic tank capacity	16 US gal (60.6 l)
Hydraulic oil	Shell Naturelle HF-M biodegradable product code 407-214
Oil filter	CSG05050-T25A

Fig. 8

F Series Motorized Unit – Weight of components [lb (kg)]			
Product code	**Ref code**	**Description**	**Weight**
20000003-K-02000-1	F1017G-K	F Series motorized unit (model 1017)	8500 lb (3856 kg)
20000003-K-01000-1	F1033G-K	F Series motorized unit (model 1033)	9500 lb (4309 kg)
20023401-0-00000-2	FMAS-000	Mast assembly	365 lb (166 kg)
20035401-0-00000-1	FTMA-000	Main trolley assembly	460 lb (209 kg)
20035106-0-00000-1	FTMO-000	Motor trolley assembly	920 lb (417 kg)
20000003-0-10000-1	FMAF-000	Main frame assembly	435 lb (197 kg)
20003202-0-00000-1	FLBG-000L	Bridge link assembly (Left)	145 lb (66 kg)
20003202-0-10000-1	FLBG-000R	Bridge link assembly (Right)	145 lb (66 kg)
20000302-0-00000-1	FITF-000	Intermediate frame assembly	185 lb (84 kg)
A0540000-0000	FPNG-000	Control panel	111 lb (50 kg)
20003806-0-00000-1	FBPG-000	Power pack with bridge	1110 lb (504 kg)
20001605-0-10000-2	FBP-000A	Base pedestal assembly (Type 2)	250 lb (113 kg)
20001705-0-00000-1	FBP-000B	Base pedestal extension assembly *	220 lb (100 kg)
20003C01-0-00000-1	FBG30-000	30" (76 cm) bridge assembly	190 lb (86 kg)
20003D01-0-00000-1	FBG60-000	60" (1.5 m) bridge assembly	380 lb (172 kg)
20001002-0-00000-1	FMC-000	Mobile chassis	2700 lb (1225 kg)
20012401-0-00000-1	FBSW-100	Swivel bridge	205 lb (93 kg)
* Left and right base pedestal extension assemblies sold together			

Fig. 9

Motorized Unit Overview (cont'd)

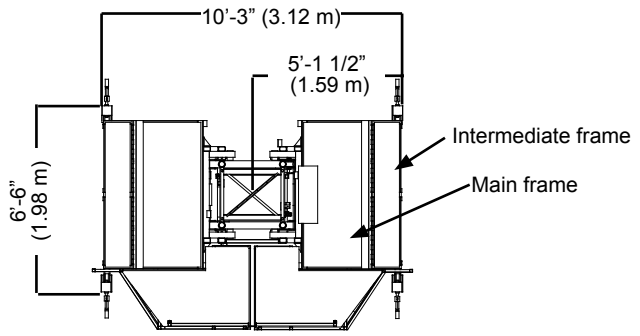
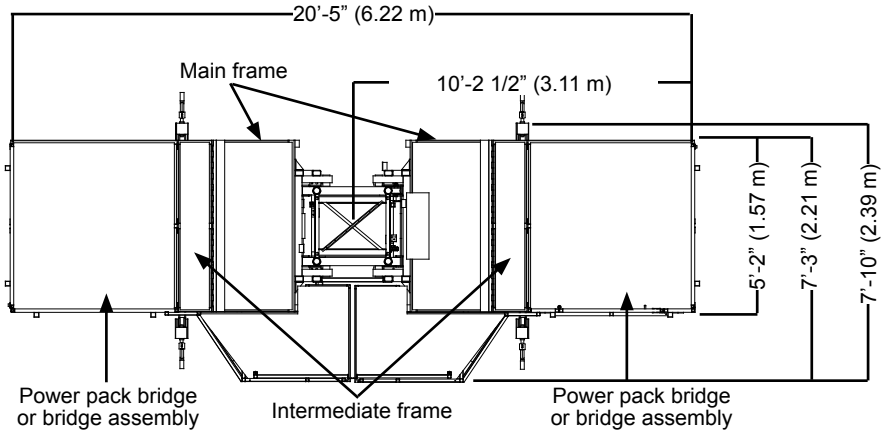


Fig. 10 **Top view**



Top view *Fig. 11*

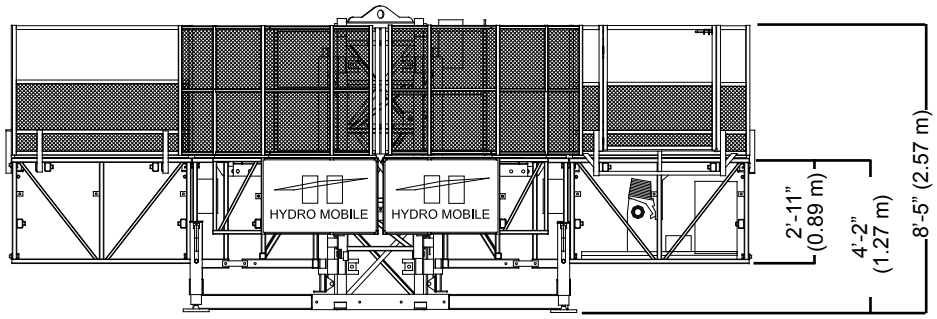


Fig. 12

Back view

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- **C**apability of identifying existing and predictable hazards;
2- **A**uthority to take prompt corrective action;
3- **T**raining and knowledge to assemble, operate, dismantle and move this system;
4- **O**perator's manual information on hand at all times;
5- **E**xperience (on the job) to assemble, operate, dismantle and move this system.

Operating instructions

1- Prepare a plan showing how the mast climb working 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 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 Bearing Capacities* table herein (fig. 20, p. 16). 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**. Contact a licensed 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 a 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 measuring 2" x 10" or 12" (5 cm x 25 cm or 30 cm) must resist a load of 265 lb (120 kg) at the 4' (1.2 m) mid range.
8- IMPORTANT: It is strongly recommended not to use equipment such as Bobcats, jack-hammers, backhoes, etc., on Hydro Mobile platforms.
9- Always wear individual protection equipment such as a helmet, safety boots, a fall arrest harness, etc., when working on the platform.
10- Unless authorized by Hydro Mobile prior to operation, the platform should not be raised higher than 500' (152 m).

Performance and Safety Rules (cont'd)

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.
13- After installation, mark off limit areas of the system using fencing, barriers, warning tape and note emergency phone numbers (fire and police dept.) for quick reference. Have an emergency evacuation plan ready to execute in case of need.
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 a staircase or through an opening in the building. The use of appropriate fall protection equipment is **mandatory** when modifying plank configuration. Failure to use fall protection equipment can expose user to serious injury or death.
17- In the event of an anomaly which could compromise security, immobilize the unit and inform the responsible person.
18- It is strongly recommended not to touch any of the moving parts on the motorized unit when it is in use.
19- It is advised to close all access doors on the motorized unit when they are not in use.
20- 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.
21- The motorized unit must not be used or operated during an electrical thunderstorm.

Positioning the Motorized Unit

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, establish the position of each motorized unit (see *Distances* table, fig. 16, p. 15) and determine if there are obstacles, and what are the cribbing and wall tie requirements. Prepare base units (F1033 or F1017) according to the plan/layout.

3- Before installing the motorized unit, determine where the cribbing will rest. The ground under the motorized unit should be level, clear of debris and have the proper bearing capacity (see *Minimum Bearing Capacities* table, fig. 20, p. 16). 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.

4- Distance from finished wall (fig. 17, p. 15) 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 maximum allowable distance between the motorized unit, including its accessories, and the work.

Dimensions of the Motorized Unit (top view)

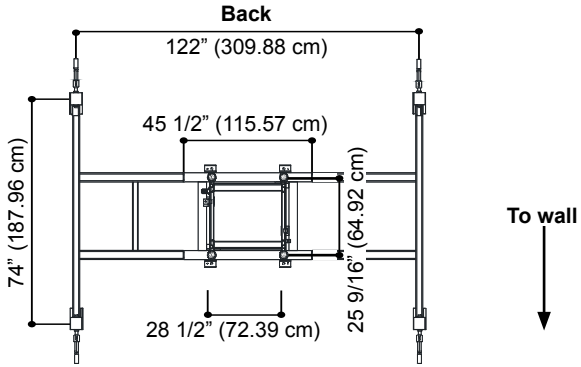


Fig. 13

5- For minimum bearing capacity values, refer to the *Minimum Bearing Capacities* table (fig. 20, p. 16). Should actual soil bearing capacity be inferior to values in the table, please seek instructions and recommendations from Hydro Mobile.

WARNING
The jacks on the base pedestal extension are designed to level the motorized unit and should not be used to support the load.

Positioning the Motorized Unit (cont'd)

6- Unload the base of the motorized unit with a forklift or a crane. Lift the base of the motorized unit either by the mast head or from under the base pedestal (see fig. 1, p. 6).

7- Align the base of the motorized unit with the wall face or the structure and lower it into place.

8- Using the jacks on the base pedestal extension, level the mast on both its front and side axis, then adjust the cribbing so the base pedestal sits squarely and level on the cribbing.

9- On model F1017, install the power pack bridge next to the base unit, on one side of the mast. Install a bridge on the opposite side of the mast, as required. On model F1033, install each power pack bridge on either side of the mast. It should be noted that power pack bridges must always be installed next to the base unit (see fig. 1, p. 6). For more information about bridge installation and the use of the bridge installation support bracket, refer to the *Bridges* section, p. 21.

10- Remove the bridge link guardrail and install the guardrail door or standard guardrail on the bridge and power pack bridge, then reinstall the bridge link guardrail. If guardrails need to be temporarily removed, make sure the workers wear proper fall protection equipment and are tied securely to the main trolley. For more information about guardrails, refer to the *Guardrails* section on p. 57.

11- Assemble the base unit components: control panel, hydraulics, electrical wiring (see *Basic Components Hookup* section on p. 29 for more details).

12- Using the jib arm, a crane or a forklift, load mast sections on the platform (see *Jib Arm* section on p. 60 for more information on its installation). Mast sections should be distributed equally on either side of the mast to ensure good balance. Refer to the *Bearing Capacities* section on page 51 for more information about loading the platform.

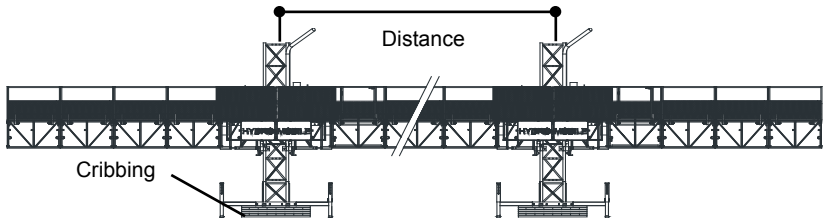


Fig. 14

NOTE
A power pack bridge must always be installed next to the base unit.

Positioning the Motorized Unit (cont'd)

13- Remove the mast head and proceed with the installation of mast sections. Refer to the *Masts and Mast Head* section on p. 45 for more details on how to install mast sections. After the first mast section is installed, raise the motorized unit by 2 to 4' (0.6 to 1.2 m), and then lower it again to verify the proper operation of the bottom limit switch (see the *Control Panel* section on p. 39 for details).

14- 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 *Wall Ties* section on p. 47 for instructions about the installation of wall ties.

15- Repeat steps 12 through 14 until the setup is completed. Make sure that the last mast section is at least 3' (0.9 m) above the highest working platform of the setup. Consequently, the highest working platform of the setup must not be raised above that last mast section. Install the mast head on top of the last mast section (see the *Masts and Mast Head* section on p. 45 for instructions).

16- Lower the motorized unit to ground level, verifying wall ties and mast bolts on the way down and making sure all are properly secured and in good condition. Apply grease to the rack and gears and allow the grease to stand for 2-3 hours. Use Chevron open gear lubricant part # A0560001-0000.

Fig. 15

17- With the motorized unit at ground level, remove the jib arm.

18- Verify the level of the platform by checking the pendulum in the pendulum box located on the intermediate frame (see fig. 2, p. 6). Test the tilt limit switch at -3º, -5º, +3º and +5º and adjust the pendulum if required (see the *Pendulum* section on p. 44 for more information).

19- 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 *Guardrails* and *Access Stairs* sections). Adjust outriggers and install planks, as required (see the *Outriggers* section on p. 56 for more information).

WARNING
The last mast section must be at least 3' (0.9 m) above the highest working platform of the setup. Consequently, the highest working platform of the setup must not be raised above the last mast section.

Positioning the Motorized Unit (cont'd)

Multiple mast installation

1- Set up the first motorized unit as described in the standard installation instructions (single mast) on p. 12.

2- Install as many bearing bridges as required and allowed. Refer to the *Bridges* section on p. 21 for more information on bearing installations and the use of bridge installation accessories such as the bridge lifting bar and the bridge installation bracket. Refer also to the *Bearing Capacities* section on p. 51 for the maximum number of bridges permitted in a bearing bridge setup.

3- Make sure an intermediate frame is properly installed on the second motorized unit. Connect the intermediate frame of the second motorized unit to the last bridge installed (fig. 45, p. 25). See the *Bridges* section on p. 21 for more information.

4- Before lowering the base of the second motorized unit, determine where the cribbing will rest. The ground under the motorized unit should be level, clear of debris and have the proper bearing capacity (see *Minimum Bearing Capacities* table, fig. 20, p. 16). Set the cribbing and lower the base of the motorized unit.

5- Using the jacks on the base pedestal extension, level the mast on both its front and side axis, then adjust the cribbing so the base pedestal sits squarely and level on the cribbing.

6- Proceed with the installation of bridges on the opposite side of the second motorized unit, as required. Refer to the *Bridges* section on p. 21 for information on a cantilever installation and to the *Bearing Capacities* section on p. 51 for the maximum number of bridges allowed in a cantilever setup.

Distances	
Center to center of masts for bearing installation (approximate distance)	
No. of bridges (including power pack)	**Distance**
11	65' 4" (19.9 m)
10	60' 4" (18.4 m)
9	55' 4" (16.9 m)
8	50' 4" (15.3 m)
7	45' 4" (13.8 m)
6	40' 4" (12.3 m)
5	35' 4" (10.8 m)
4	30' 4" (9.3 m)
3	25' 4" (7.7 m)

Fig. 16

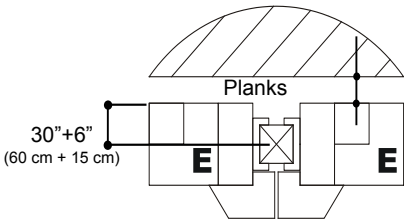


Fig. 17

Positioning the Motorized Unit (cont'd)

Base pedestal and cribbing

The ground under the motorized unit should be level, clear of debris and have the proper bearing capacity. The plywood and planks used as cribbing should be nailed together to prevent slipping, leaving 1/2" (1.3 cm) of space between planks.

Fig. 18

SUGGESTED CRIBBING				
		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)
1	Plywood 1/2" (13 mm)	3	4	5
2	2"x6"x36" (5 cm x 15 cm x 91 cm)	12		
	2"x6"x48" (5 cm x 15 cm x 122 cm)		18	
	2"x6"x60" (5 cm x 15 cm x 153 cm)			24

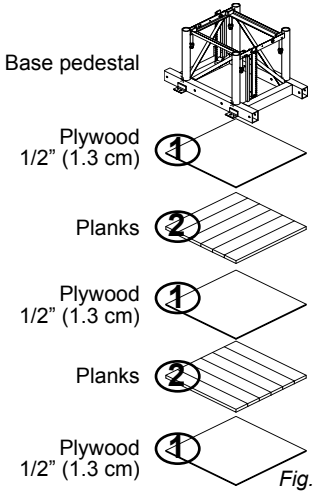


Fig. 19

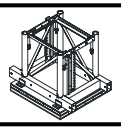
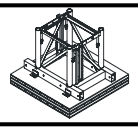
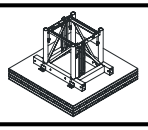
Minimum Bearing Capacities						
Pressure (psi)						
Height		Reaction		 3'x3'x4 1/2" (0.9 m x 0.9 m x 1.4 m)	 4'x4'x 6 1/2" (1.2 m x 1.2 m x 2 m)	 5'x5'x8 1/2" (1.5 m x 1.5 m x 2.6 m)
ft	m	lb	kg			
0	0	18 000	8165	14	8	6
50	15	22 000	9979	17	10	8
100	30	26 000	11 793	20	11	9
150	46	30 000	13 608	23	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. 20

WARNING

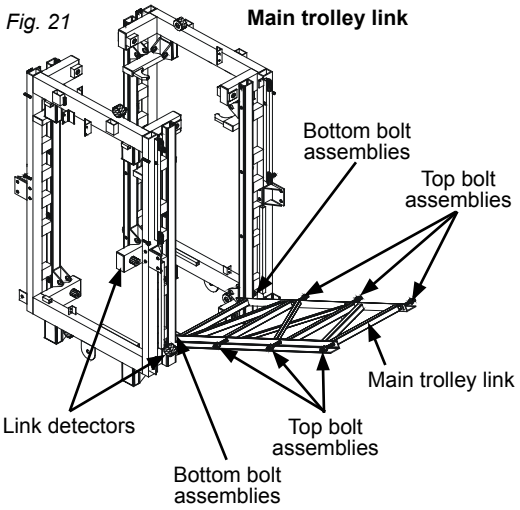
Ground capacity must be verified by a professional engineer. Should actual soil bearing capacity be inferior to values in the *Minimum Bearing Capacities* table (fig. 20), please seek instructions and recommendations from Hydro Mobile.

Positioning the Motorized Unit (cont'd)

Splitting a platform (applicable to model F1033 only)

1- Make sure all hydraulic and electrical components are properly hooked up and in good working order (see the *Hydraulic* and *Electrical Components Hookup*, sections on pp. 30 and 31).
2- Remove the top (6) bolt assemblies from the main trolley link (fig. 21).
3- Pull the main trolley link down and remove the last two (2) sets of bolts at the bottom of the main trolley link.
4- Remove the main trolley link.
5- Turn the control panel link switch to the "NL" position (unlinked). See the *Control Panel* section on p. 39 for more information.

Fig. 21



Removal

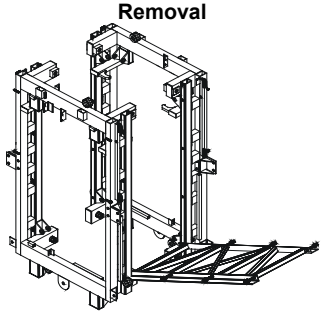


Fig. 22

Installation

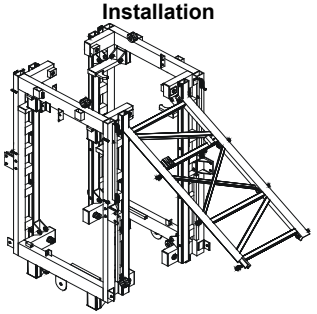


Fig. 23

Motorized Unit – Setups and Configurations

Legend

P = Control panel
PP = Power pack
17’ = 17’/min (5.2 m/min)
33’ = 33’/min (10 m/min)
— — — = Electrical extension kit

WARNING
When using a double mast system, make sure that the lifting speed is equal on each side.

NOTE
Using only one power pack will generate a lifting speed of 17’ /min (5.2 m/min); using two power packs will generate a lifting speed of 33’ /min (10 m/min). A single control panel can control a **maximum** of two motor trollies.

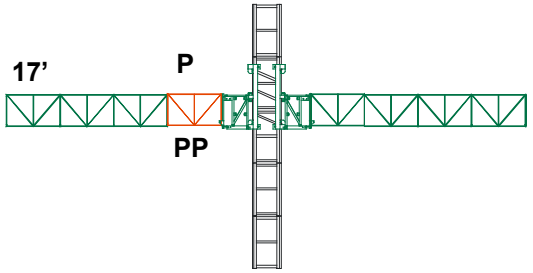


Fig. 24

Model F1017

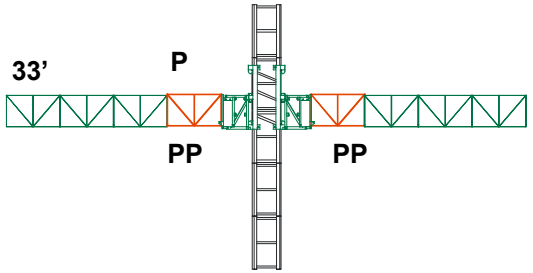


Fig. 25

Model F1033

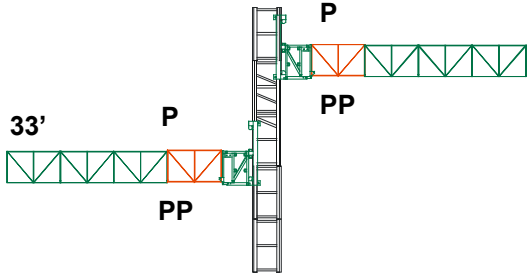


Fig. 26

Model F1033
+ extra control panel unlinked

Motorized Unit – Setups and Configurations (cont’d)

Legend

P = Control panel
PP = Power pack
17’ = 17’/min (5.2 m/min)
33’ = 33’/min (10 m/min)
— — — = Electrical extension kit

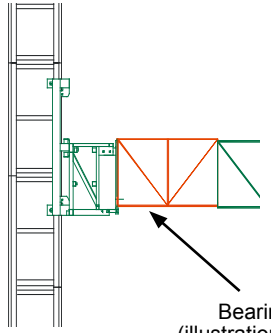


Fig. 27

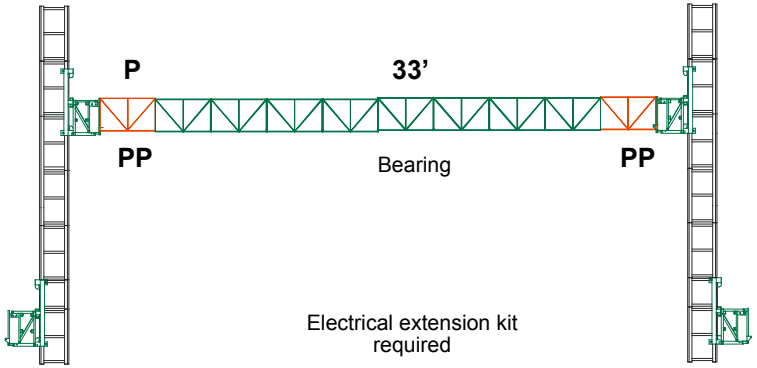


Fig. 28

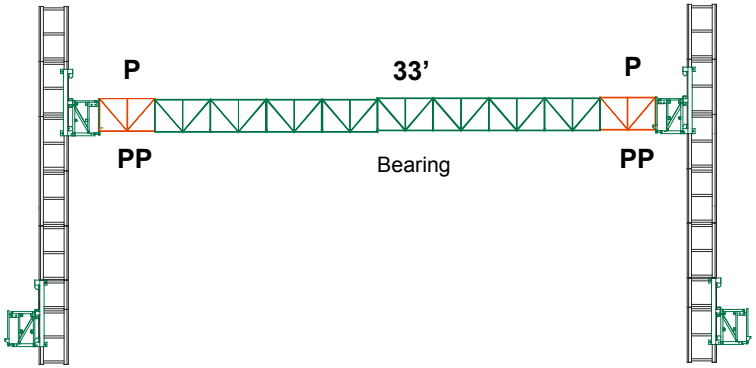


Fig. 29

Motorized Unit – Setups and Configurations (cont'd)

Legend

P = Control panel
PP = Power pack
17' = 17'/min (5.2 m/min)
33' = 33'/min (10 m/min)
— — — = Electrical extension kit

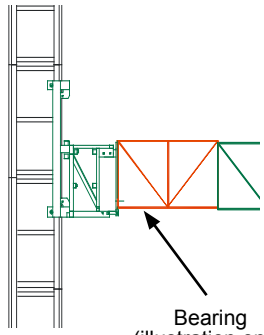


Fig. 30

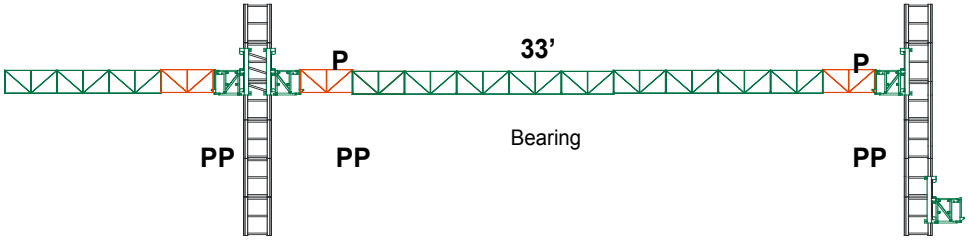


Fig. 31

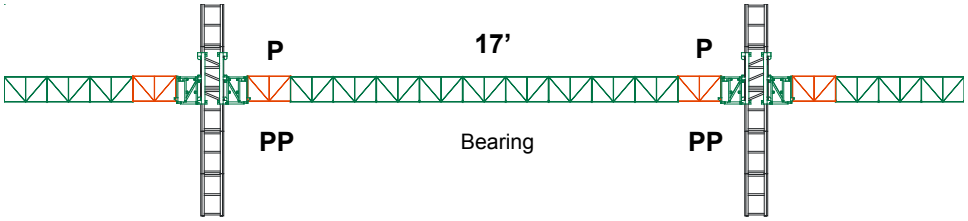


Fig. 32

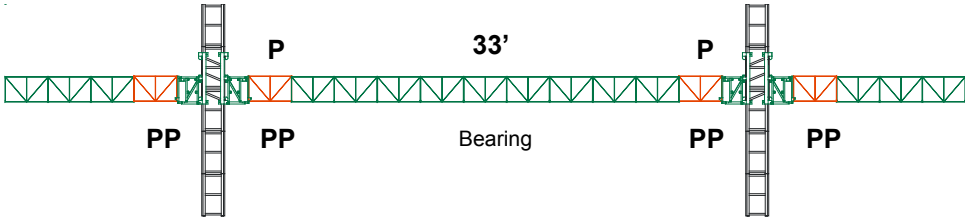


Fig. 33

NOTE
Configurations with 3 or 4 motor trollies cannot be controlled by only one control panel.

Bridges

Instructions for assembling and dismantling – standard bridge

1- Align both bridges using the tapered bushings (fig. 35).

2- Assemble both bridges together using the appropriate bolts and nuts (fig. 34). See fig. 37 for a detailed description of the bolt assembly.

3- Set up bridges alternately on each side of the mast in such a sequence as to warrant the balance of the structure.

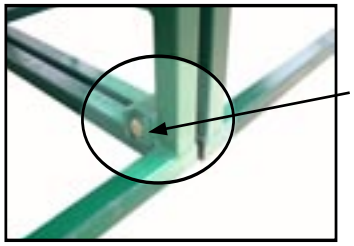


Fig. 34

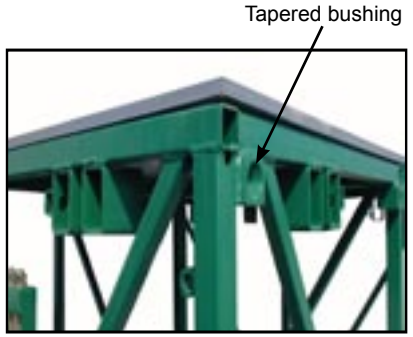


Fig. 35

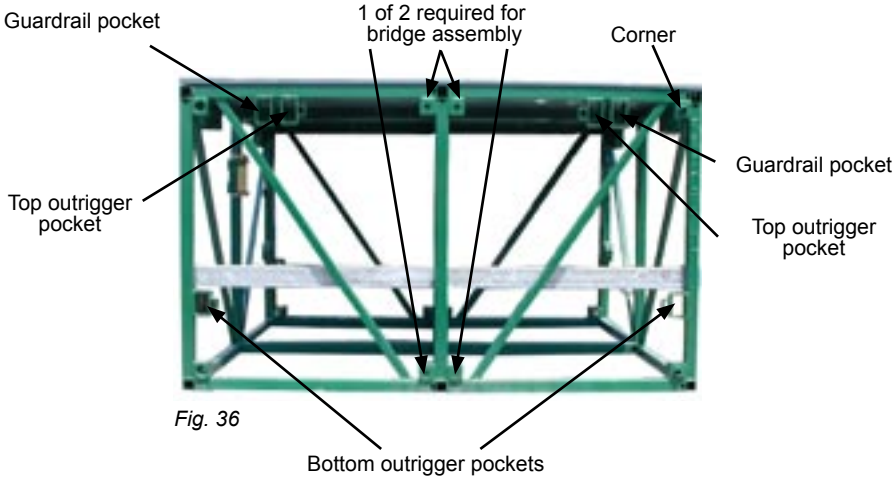


Fig. 36

Bolt Assembly Description	
	
Bolt 5/8"x 5 1/2" GR8	6
Nut 5/8"	6
Lock washer 5/8"	6

Fig. 37

Bridges (cont'd)

Bridge installation bracket (optional)

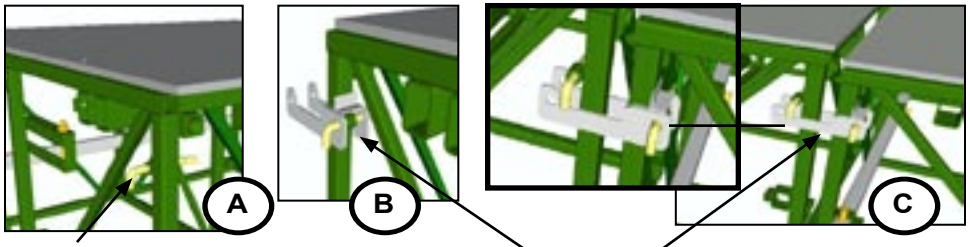


Fig. 38

Step A: Under the bridge to be installed, slide toggle pins in the designated hole on each side of the bridge.

Step B: Attach the bridge installation brackets to the bridge already bolted to the base.

Step C: Lift the bridge to be installed and lower it down so that the toggle pins are completely supported by the bridge installation bracket. Assemble the bridges using the appropriate bolts and nuts (fig. 37, p. 21). Remove the brackets when the bridges are bolted together.

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

Bridge lifting bar (optional)

Fig. 39

Slide the bridge lifting bar and screw jacks at least 6" (15 cm) in under the outer edge of the power pack bridge or the bridge assembly attached to the intermediate frame (fig. 39). Using the jacks, raise the bridge lifting bar under the power pack bridge or bridge assembly until this one is **slightly** at an angle. For more information, refer to the *Bridge lifting bar installation process* illustrated on p. 25.

NOTE
The installation of a bearing bridge setup will require up to two bridge lifting bars (fig. 45, p. 25).

Bridges (cont'd)

Bearing bridge installation

1- With the help of a bridge lifting bar or any other lifting device such as a forklift truck, raise the power pack bridge or bridge assembly until it is **slightly** at an angle.

2- Starting with the middle yoke plate (at the bottom of the intermediate frame), remove the bolt and the two nuts to unhook one side of each yoke plate (3). Also starting with the middle hitch pin, remove each hitch pin at top of the intermediate frame (3) (fig. 40).

3- If using a bridge lifting bar, leave it into place. Push in the power pack bridge or the bridge assembly until the intermediate frame is snug against the main frame.

4- Using a bridge installation support bracket or any other lifting device such as a forklift truck, install an additional bridge.

5- After two additional bridges have been installed, slide a second bridge lifting bar under the last bridge installed, as shown in step "G" of fig. 45. Install the bridge lifting bars alternately every two bridges added.

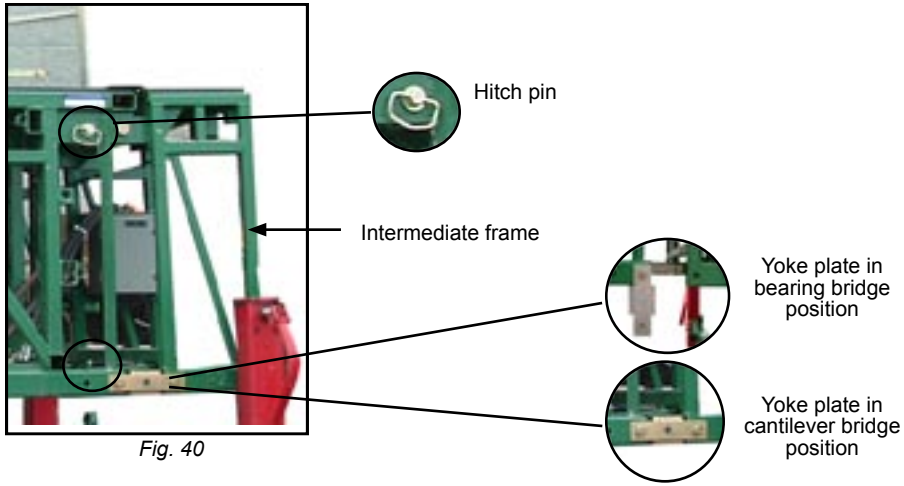


Fig. 40

6- Repeat steps 1 through 5 until the setup has the desired length. Refer to the *Bearing Capacities* section on p. 51 for the maximum number of bearing bridges allowed for each setup configuration. Leave a bridge lifting bar under the last bridge installed.

7- Make sure an intermediate frame is installed properly on the second motorized unit ("B" side in fig. 41). Connect the second motorized unit on the "B" side to the last bridge installed ("A" side of the setup in fig. 41) as illustrated in step "G" of fig. 45. See the *Bridges* section on p. 21 for more information.

Bridges (cont'd)

Bearing bridge installation

8- With the help of a lifting device such as a crane or a forklift truck, align the second motorized unit ("B", fig. 41) to the intermediate frame installed in step 7 and bolt them together, making sure the motorized unit is pushed in far enough so that the slots on the intermediate frame are covered completely by the plates on the motorized unit.

9- 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.

10- Refer to the *Bearing Capacities* section on p. 51 for information on the number of bridges allowed for a bearing bridge configuration.

11- Make sure both pendulums are free to operate (see the *Pendulum* section, p. 44).

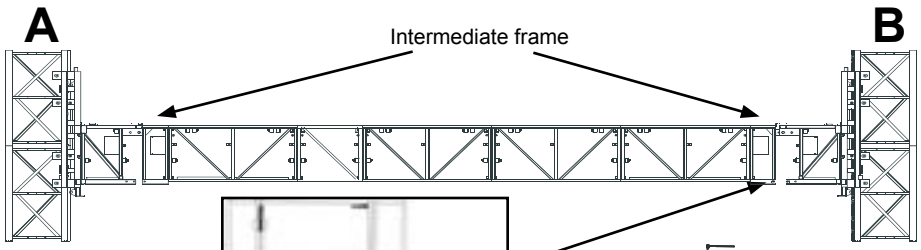


Fig. 41

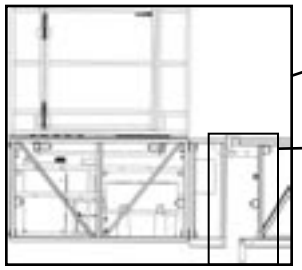


Fig. 42

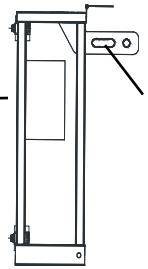


Fig. 43

Cantilever bridge installation

1- Make sure all yoke plates (3) are in cantilever bridge position with both ends attached and that all hitch pins (3) are properly inserted (see fig. 40).

2- Using a bridge installation bracket or any lifting device such as a crane or a lift truck, bolt the power pack bridge or bridge assembly to the intermediate frame (fig. 39).

3- Refer to the *Bearing Capacities* section on p. 51 for information on the number of bridges allowed for a cantilever bridge configuration.

Bridges (cont'd)

Bridge lifting bar installation process

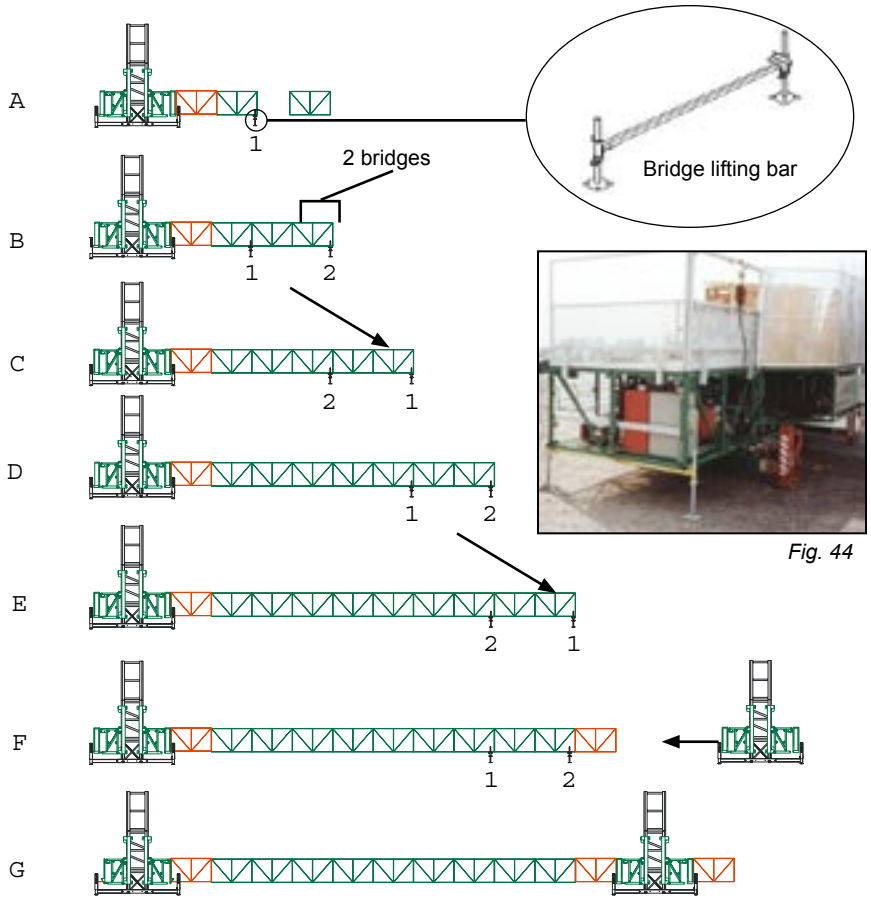


Fig. 45

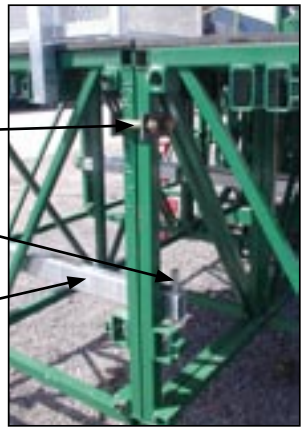
Fig. 44

Bridges (cont'd)
Forward Extension Bridge
(optional)

The forward extension bridge can be used to store tools, such as a cutting saw, and is assembled using a regular bridge and the optional forward extension kit, which includes an outrigger and three forward extension plate assemblies. The forward extension bridge can be attached to any power pack bridge or to the first bridge assembly closest to the mast in the setup, as shown in fig. 48 and fig. 49.

Fig. 46

Fig. 47



Installation

1- Remove the plank stop pins from the outriggers (from the bridge and the extension kit) and slide the outriggers in the bottom outrigger pockets of the power pack bridge or the bridge assembly, leaving about 6" (15 cm) sticking out of the bridge. Do not tighten the bolts.
2- Align the forward extension bridge with the bridge assembly and slide the protruding ends of the outriggers in the bottom outrigger pockets of the forward extension bridge. Insert the plank stop pin in each outrigger (fig. 47).
3- Install the forward extension plate assemblies (3) at the top in order to hold both bridges tightly together (fig. 47). 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 forward extension.
6- If required, install cross box kits to plank the inside corner of the forward extension (see fig. 120, p. 55).
7- If required, use the forward extension to store counterweight material or install top outriggers and planking on the opposite end of the bridge assembly (fig. 48 and 49) and apply counterweight.

It is recommended to use a **maximum of two forward extensions per setup**. For any other configuration using forward extensions, contact the distributor or the Hydro Mobile technical support team.

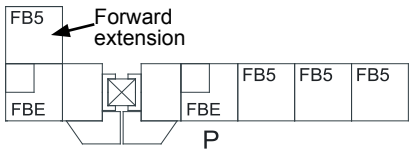


Fig. 48

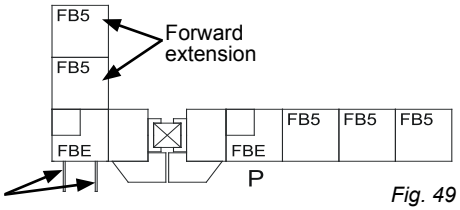


Fig. 49

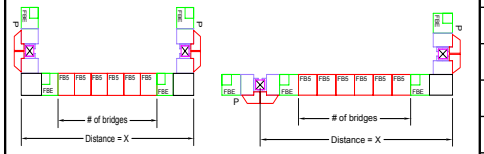
Bridges (cont'd)
Corner Bridge
(optional)

The corner bridge assembly includes a 90-degree bridge adapter that acts as an intermediate frame.

1- Unplug the pendulum from the control box. Remove the intermediate frame from the main frame.
2- Using the appropriate bolt and pin assemblies, attach the bottom and top part of the corner bridge to the main frame.
3- For a bearing installation (see fig. 52), use the yoke plates and bolt assemblies to attach the intermediate frame to the corner bridge as described in the instructions for a bearing bridge installation (see page 23).
4- For a cantilever installation, use the yoke plates, pins and bolt assemblies to attach the intermediate frame to the corner bridge as described in the instructions for a cantilever installation (see page 24).
5- Plug the pendulum to the control box.
6- Bolt the power pack bridge to the intermediate frame.
7- Continue the bearing or cantilever installation as required, following the instructions on pages 23 and 24 and in the *Positioning the Motorized Unit* section, on page 12. Refer to the table shown in fig. 50 for information on capacities and the maximum distance allowed between two corner bridges in a setup.

For more information on how to use a corner bridge assembly or how to install it, contact the distributor or the Hydro Mobile technical support team.

Maximum distances for corner bridge setup



# of bridges	lb	kg	Distance X +/- 1 ft	Distance X +/- 0,3m
1	5700	2586	27	8.23
2	5300	2404	32	9.75
3	4900	2223	37	11.28
4	4500	2041	42	12.80
5	4100	1860	47	14.33

Fig. 50

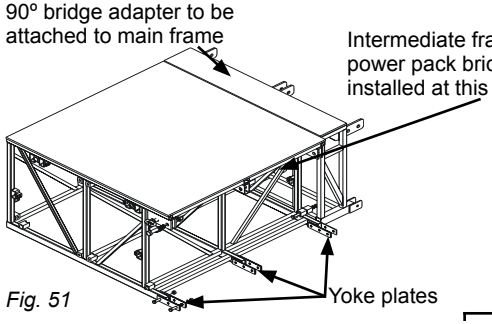


Fig. 51

Bearing installation

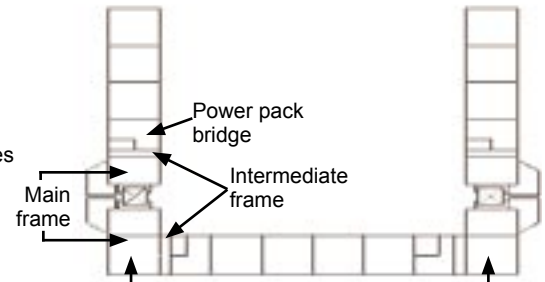


Fig. 52

Bridges (cont'd)
Swivel Bridge
(optional)

1 - Unplug the pendulum from the control box and remove the intermediate frame from the main frame.

2 - Bolt the bottom and top part of the swivel bridge to the main frame. Using the steel rods, position the swivel bridge at the angle required by the setup (fig. 53).

3- For a cantilever installation (see fig. 54), use the yoke plates, pins and bolt assemblies to attach the intermediate frame to the swivel bridge as described in the instructions for a cantilever installation (see p. 24).

4- For a bearing installation (see fig. 55), use the yoke plates and bolt assemblies to attach the intermediate frame to the swivel bridge as described in the instructions for a bearing bridge installation (see p. 23).

5- Plug the pendulum to the control box.

6 - Bolt the power pack bridge to the intermediate frame.

7 - In a multiple mast installation, repeat steps 1 through 6 for each swivel bridge in the setup.

8- Continue the bearing or cantilever installation as required, following the instructions on pages 23 and 24 and in the *Positioning the Motorized Unit* section, on page 12. Refer to the *Bearing Capacities* section on p. 51 for information on the number of bridges allowed for each setup configuration.

For more information on how to use a swivel bridge assembly and how to install it or for any configuration other than illustrated below (fig. 54 and 55), contact the distributor or the Hydro Mobile technical support team.

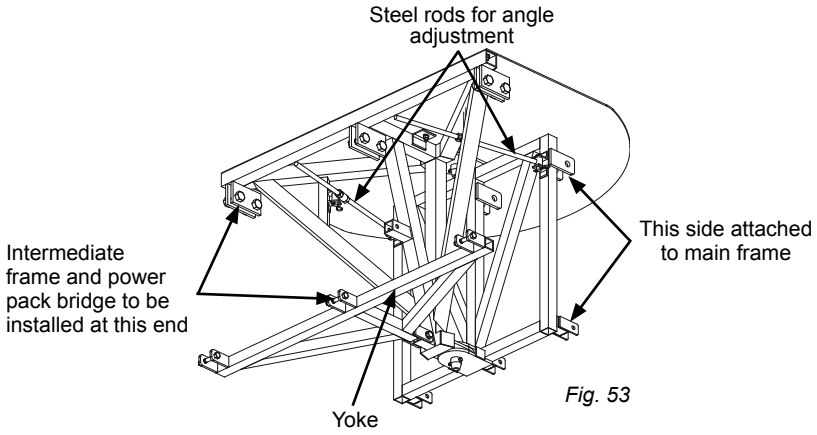


Fig. 53

Cantilever installation

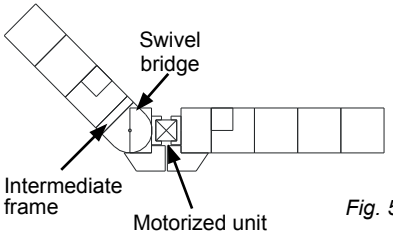


Fig. 54

(linked configuration **mandatory**)

Bearing installation

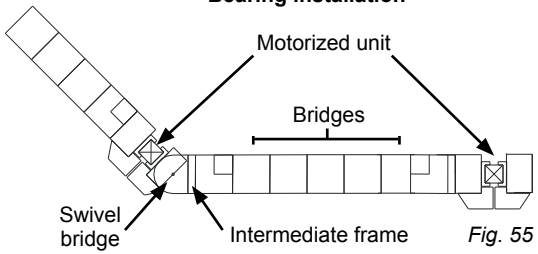


Fig. 55

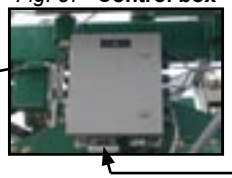
Basic Components Hookup

It is mandatory to make sure that all components are properly hooked up before operating an F Series motorized unit. The hookup sequence and the components legend illustrated below apply to both hydraulic and electrical components hookups described in the following pages. For more information about components and hookups, contact the distributor or the Hydro Mobile technical support team.

Fig. 56 **Control panel**

Local and remote connectors must not be reversed

Fig. 57 **Control box**



Connect control box to top of control panel

Fig. 58 **Pendulum box**

Connect pendulum box to bottom of control box

Connect motor box to bottom of control panel

Fig. 59 **Motor box**

Legend

P	=	Control panel
PP	=	Power pack
CB	=	Control box (on the main trolley)
MB	=	Motor box (on the power pack bridge)
PB	=	Pendulum box (on the intermediate frame)
Local	=	Side with control panel

— — — = Electrical extension kit

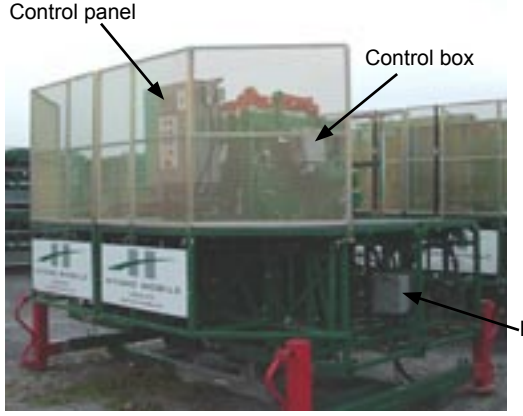


Fig. 60

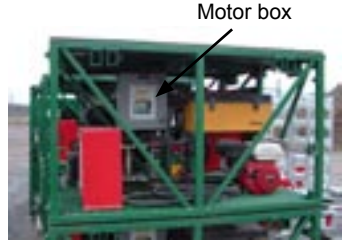


Fig. 61 **Power pack bridge**

Hydraulic Components Hookup

It is mandatory to make sure that all hydraulic components are properly hooked up and do not leak before operating an F Series motorized unit. Each of the four connectors on the T-connector (fig. 62) is different and is not interchangeable.

Fig. 62 T-connector

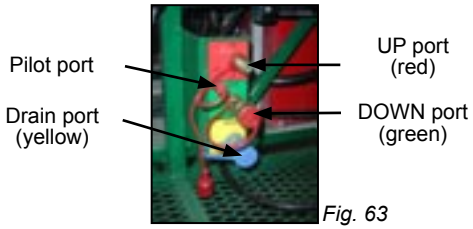


Fig. 63 Power pack connection plate

Hookup procedure – model F1017

1- Plug one end of the T-connector (fig. 62) into the connection plate of the power pack (fig. 63).
2- Plug the local side of the motor trolley into the T-connector.
3- Plug the remote side of the motor trolley into the other end of the T-connector.

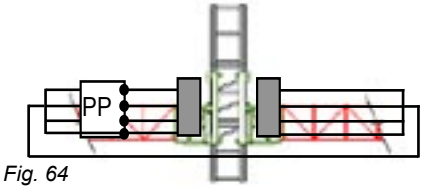


Fig. 64 **F1017 – linked (with T-connector)**

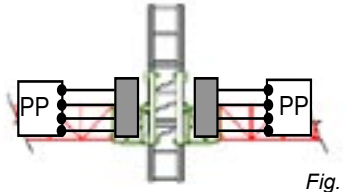


Fig. 65 **F1033 – linked or unlinked**

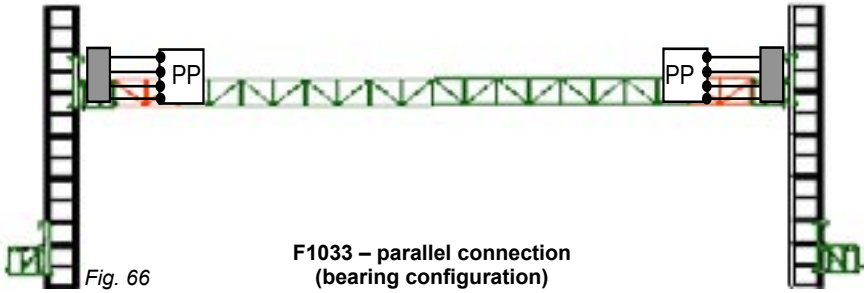


Fig. 66 **F1033 – parallel connection (bearing configuration)**

Hookup procedure – model F1033

1- Plug the local side of the motor trolley hose into the connection plate of the local power pack (fig. 63).
2- Plug the remote side of the motor trolley hose into the connection plate of the remote power pack.

Electrical Components Hookup

It is mandatory to make sure that all electrical components are properly hooked up before operating an F Series motorized unit.

Hookup of model F1017 – linked configuration (fig. 67)

1- Hook up the **local** motor box (MB) connector from the power pack (PP) to the **local** motor box (MB) input of the control panel (P) (fig. 82, p. 39). In this configuration, the **remote** motor box (MB) input of the control panel (P) is not used.
2- Hook up the **local** pendulum box (PB) to the **local** control box (CB).
3- Hook up the **local** control box (CB) connector to the **local** control box (CB) input of the control panel (P).
4- Hook up the **remote** pendulum box (PB) connector to the **remote** control box CB).
5- Hook up the **remote** control box (CB) into the **remote** control box (CB) input of the control panel (P).
6- Turn the link switch of the control panel to “L” (linked).

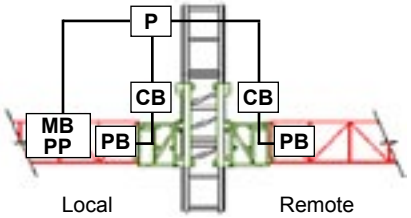


Fig. 67 **F1017 – linked**

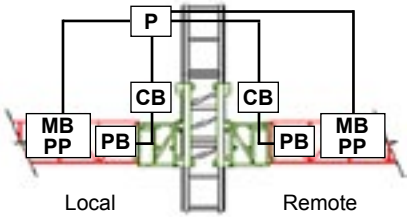


Fig. 68 **F1033 – linked**

** See legend on p. 29*

Hookup of model F1033 – linked configuration (fig. 68)

1- Hook up the **local** motor box (MB) connector from the power pack (PP) to the **local** motor box (MB) input of the control panel (P).
2- Hook up the **local** pendulum box (PB) to the **local** control box (CB).
3- Hook up the control box (CB) connector to the **local** control box (CB) input of the control panel (P).
4- Hook up the **remote** motor box (MB) connector from the power pack (PP) to the **remote** motor box (MB) input of the control panel (P) (fig. 82, p. 39).
5- Hook up the **remote** pendulum box (PB) connector to the **remote** control box (CB).
6- Hook up the **remote** control box (CB) into the **remote** control box (CB) input of the control panel (P).
7- Turn the link switch of the control panel to “L” (linked).

Electrical Components Hookup (cont'd)

Hookup of model F1033 – unlinked cantilever configuration (fig. 69)

1- Hook up the **local** motor box (MB) connector from the power pack (PP) to the **local** motor box (MB) input of the control panel (P). In this configuration, the **remote** motor box (MB) input of the control panel (P) is not used.
2- Hook up the **local** pendulum box (PB) connector to the **local** control box (CB).
3- Hook up the **local** control box (CB) connector to the **local** control box (CB) input of the control panel (P).
4- Turn the link switch of the control panel to "NL" (unlinked).
5- Turn the control selection switch of the control panel to "L" (local).

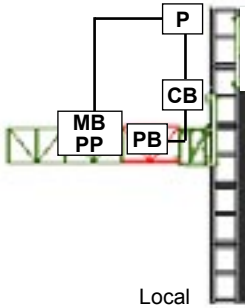


Fig. 69

F1033 – unlinked cantilever configuration

** See legend on p. 29*

Hookup of model F1033 – bearing configuration with 1 control panel (fig. 70)

Note: This setup requires the electrical extension kit (optional).

1- Hook up the **local** motor box (MB) connector from the power pack (PP) to the **local** motor box (MB) input of the control panel (P).
2- Hook up the **local** pendulum box (PB) connector to the **local** control box (CB).
3- Hook up the **local** control box (CB) connector to the **local** control box (CB) input of the control panel (P).
4- Hook up the **remote** motor box (MB) connector from the power pack (PP) to the **remote** motor box (MB) input of the control panel (P) using the electrical extension kit (optional).
5- Hook up the **remote** pendulum box (PB) connector to the **remote** control box (CB).
6- Hook up the **remote** control box (CB) connector into the **remote** control box (CB) input of the control panel (P) using the electrical extension kit (optional).
7- Turn the link switch of the control panel to "NL" (unlinked).
8- Turn the control selection switch of the control panel to "L+R" (local and remote).

Electrical Components Hookup (cont'd)

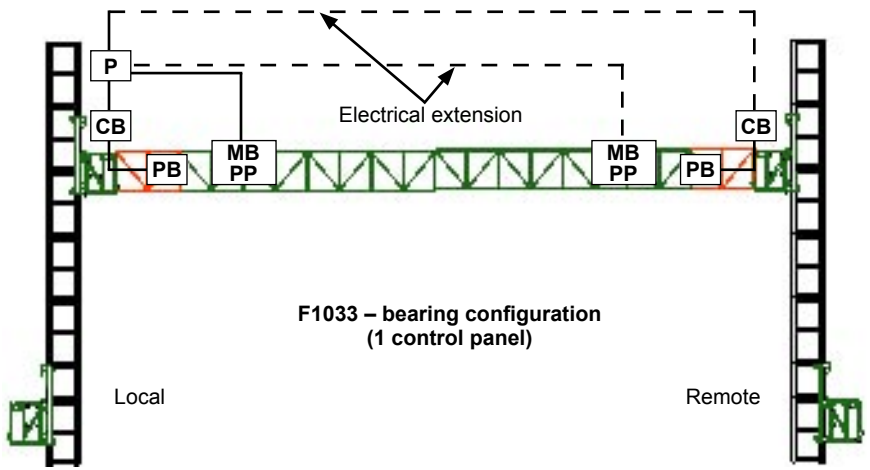


Fig. 70

Hookup of model F1033 – bearing configuration with 2 control panels (fig. 71)

Note: Perform the following steps at **both ends** of the setup.

1- Hook up the **local** motor box (MB) connector from the power pack (PP) to the **local** motor box input of the control panel (P). In this configuration, the **remote** motor box (MB) input of the control panel (P) is not used.
2- Hook up the **local** pendulum box (PB) connector to the **local** control box (CB).
3- Hook up the **local** control box (cb) connector to the **local** control box (CB) input of the control panel (P).
4- Turn the link switch of the control panel to "NL" (unlinked).
5- Turn the control selection switch of the control panel to "L" (local).

** See legend on p. 29*

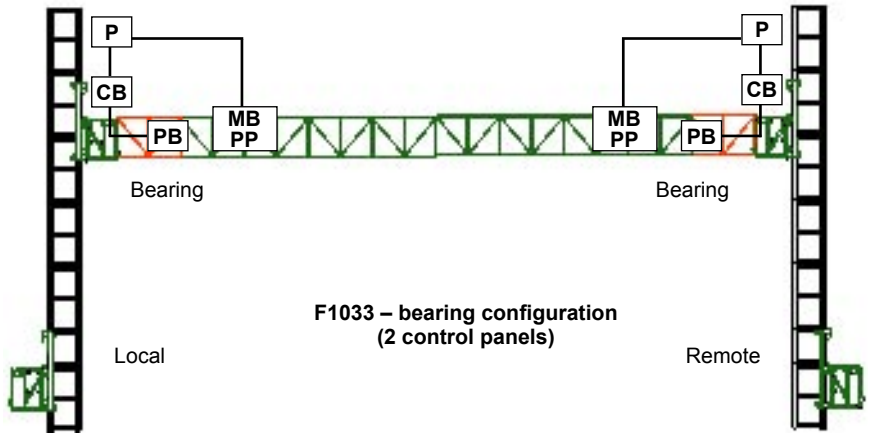


Fig. 71

Electrical Components Hookup (cont'd)

Hookup of model F1017 – 1 side cantilever linked to 1 side bearing (fig. 72)

Note: Perform the following steps at **both ends** of the setup.

1- Hook up the **local** motor box (MB) connector from the power pack (PP) to the **local** motor box (MB) input of the control panel (P).
2- Hook up the **local** pendulum box (PB) connector to the **local** control box (CB).
3- Hook up the control box (CB) connector to the **local** control box (CB) input of the control panel (P).
4- Hook up the **remote** pendulum box (PB) connector to the **remote** control box (CB).
5- Hook up the **remote** control box (CB) connector into the **remote** control box (CB) input of the control panel (P).
6- Turn the link switch of the control panel to "L" (linked).

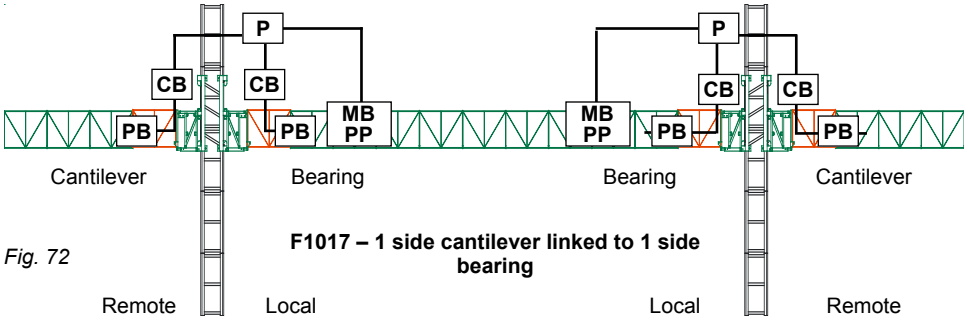


Fig. 72

F1017 – 1 side cantilever linked to 1 side bearing

Hookup of model F1033 – 1 side cantilever linked to 1 side bearing (fig. 73)

Note: Perform the following steps at **both ends** of the setup.

1- Hook up the **local** motor box (MB) connector from the power pack (PP) to the **local** motor box (MB) input of the control panel (P).
2- Hook up the **local** pendulum box (PB) connector to the **local** control box (CB).
3- Hook up the control box (CB) connector to the **local** control box (CB) input of the control panel (P).
4- Hook up the **remote** motor box (MB) connector from the power pack (PP) to the **remote** motor box (MB) input of the control panel (P).
5- Hook up the **remote** pendulum box (PB) connector to the **remote** control box (CB).
6- Hook up the **remote** control box (CB) connector into the **remote** control box (CB) input of the control panel (P).
7- Turn the link switch of the control panel to "L" (linked).

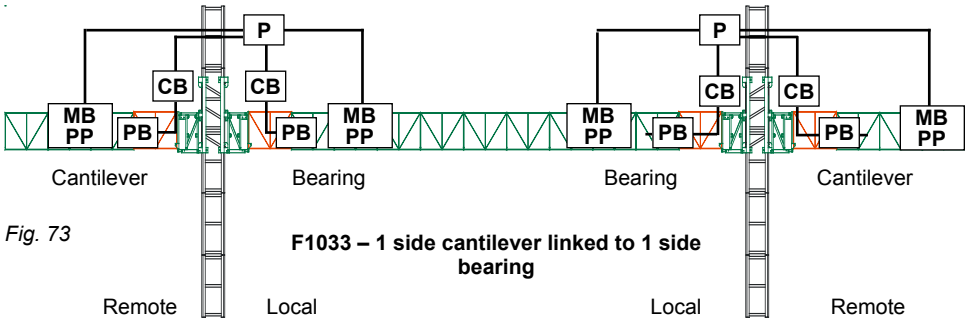


Fig. 73

F1033 – 1 side cantilever linked to 1 side bearing

Electrical Components Hookup (cont'd)

Hookup of model F1033 – 1 side cantilever linked to 1 side bearing ("A") and 1 side unlinked cantilever ("B") (fig. 74)

Hookup of "A" side of illustrated setup (fig. 74)

1- Hook up the **local** motor box (MB) connector from the power pack (PP) to the **local** motor box (MB) input of the control panel (P).
2- Hook up the **local** pendulum box (PB) connector to the **local** control box (CB).
3- Hook up the **local** control box (CB) connector to the **local** control box (CB) input of the control panel (P).
4- Hook up the **remote** motor box (MB) connector from the power pack (PP) to the **remote** motor box (MB) input of the control panel (P).
5- Hook up the **remote** pendulum box (PB) connector to the **remote** control box (CB).
6- Hook up the **remote** control box (CB) connector into the **remote** control box (CB) input of the control panel (P).
7- Turn the link switch of the control panel to "L" (linked).

Hookup of "B" side of illustrated setup (fig. 74)

1- Hook up the **local** motor box (MB) connector from the power pack (PP) to the **local** motor box input of the control panel (P). In this configuration, the **remote** motor box (MB) input of the control panel (P) is not used.
2- Hook up the **local** pendulum box (PB) connector to the **local** control box (CB).
3- Hook up the control box (CB) connector to the **local** control box (CB) input of the control panel (P).
4- Hook up the **remote** pendulum box (PB) connector to the **remote** control box (CB).
5- Hook up the **remote** control box (CB) connector into the **remote** control box (CB) input of the control panel (P).
6- Turn the link switch of the control panel to "NL" (unlinked).
7- Turn the control selection switch of the control panel to "L" (local).

** See legend on p. 29*

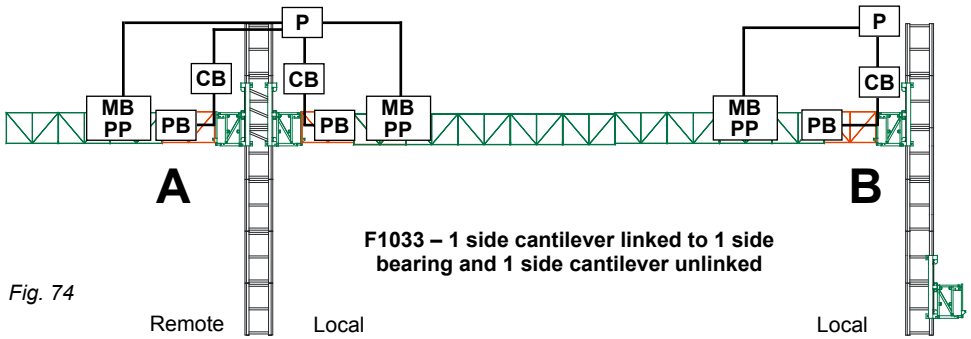


Fig. 74

F1033 – 1 side cantilever linked to 1 side bearing and 1 side cantilever unlinked

Power Pack

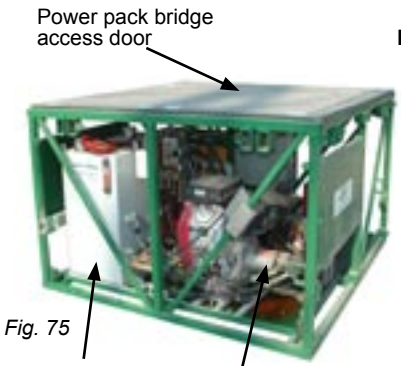


Fig. 75

Power pack bridge

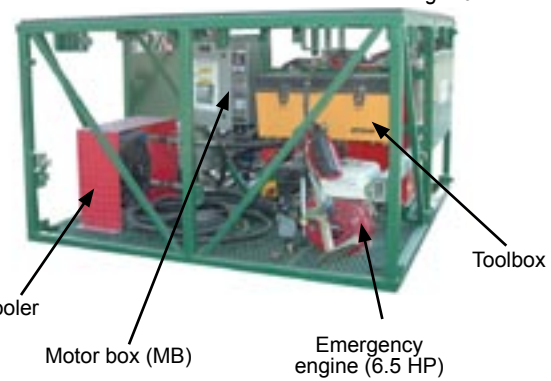


Fig. 76

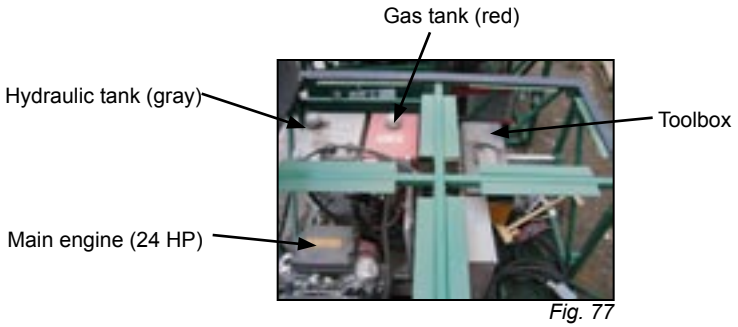


Fig. 77

Fig. 78

Tool Box Components		
Quantity	**Description**	**Product code**
2	12.5-oz (370 ml) aerosol cans of grease for rack and pinion	A0560001-0000
2	bridge installation bracket	20019301-K-01000-4
1	Operator's manual	A0680002-0000
1	Honda engine manual	A0680100-0000
4	5/8" x 1 1/2" SAE bolts	A0310005-0003
6	5/8" x 5 1/2" SAE bolts	A0310005-0017
6	5/8" SAE GR8 nuts	A0330007-0001
6	5/8" SAE lock washers	A0340109-0000
4	3/8" SAE toggle pins	A0690606-0000
4	5/8" SAE GR5 nuts	A0330007-0000

NOTE
A power pack bridge must always be installed next to the base unit, except when using a corner bridge or a swivel bridge. Refer to the *Bridges* section on p. 21 for more information.

Power Pack (cont'd)

Startup preparation instructions

1- Make sure all hydraulic and electrical components have been properly hooked up (see *Hydraulic Components Hookup* on p. 30 and *Electrical Components Hookup* on p. 31).

2- Open the power pack bridge access door (fig. 75).

3- Pull the engine controls station (fig. 79) completely out of its storage position in the toolbox. Attach it to the guardrail and bolt it in position.

4- Make sure all electrical wiring and control cables are clear of the exhaust system.

5- Check the hydraulic oil level to make sure it is at least 3/4 full. Replenish if necessary.

6- Check the gasoline level and refill if necessary.

7- Check the engine oil level and refill if necessary, in accordance with the specifications in the Honda engine manual.

8- Turn the top fuel valve lever to the "ON" (operating) position (lever in line with the hose) (fig. 81). The bottom fuel valve lever (reserve, fig. 81) should be at the "OFF" position (at a 90° angle with the hose) and be used only to bring the motorized unit back to ground level to refill the gas tank.

9- If the motorized unit is brand-new, connect the battery.

10- In a configuration using more than one power pack bridge, repeat steps 1 through 8 for each power pack.

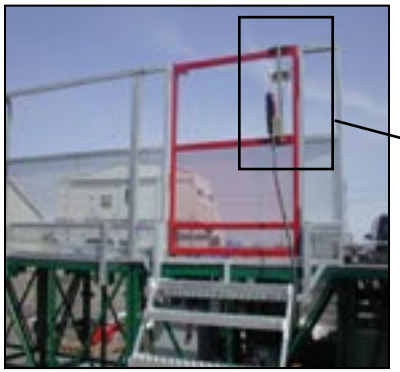


Fig. 80

Fig. 79 Engine controls station

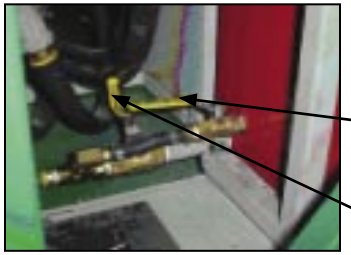


Fig. 81 Fuel valve levers

Power Pack (cont'd)

Engine and motorized unit startup procedure

1- If the engine is cold, pull out the choke handle to the closed position. If the engine is warm, leave the choke handle in the open position (pushed in).

2- Pull out the throttle handle about halfway.

3- Turn and maintain the ignition key at the "Start" position (fig. 80) to start the engine (maximum of 15 seconds). Release the key as soon as the engine is running, leaving it at the "On" position. Use the ignition key to shut off the engine (NEVER USE THE EMERGENCY STOP BUTTON ON THE CONTROL PANEL EXCEPT IN THE CASE OF AN EMERGENCY).

4- Once the engine has started, if required, slowly push down the choke handle all the way to the open position.

5- Adjust engine speed by pulling the throttle handle up to reach maximum RPM and lock it.

6- In a configuration using more than one power pack bridge, repeat steps 1 through 5 for each power pack.

7- After starting the engine(s), turn on the control panel(s).

8- If the preheating indicator light is on, wait until the control panel is ready to operate. Refer to the *Control Panel* section on p. 39 for more information.

9- If the control panel is locked ("USER PASSIVE" reading on the LED screen), enter the operator code to start operating the motorized unit. Make sure to lock the control panel when it is not in use.

Engine and motorized unit shutdown procedure

1- In a bearing installation, make sure that the pendulum has a 0 level reading**.**

2- If the control panel is locked, enter the operator code and shut down the control panel.

3- Push down the throttle handle.

4- Turn the ignition key to shut off the engine.

5- In a configuration using more than one power pack bridge and more than one control panel, repeat steps 1 through 4 for each power pack and each control panel.

WARNING
Never use the emergency stop button to shut off the engine except in the case of an emergency as this will leave the ignition on and will drain the battery.

Control Panel

The control panel is the brain behind the Hydro Mobile F Series system. The control panel is driven by a computer system programmed to detect and analyze every signal and react accordingly.The operator will be notified of any important information by a code appearing on the LED screen on the control panel (see fig. 82 and see the list of control panel alerts, on p. 41). The operator can select one of **three operating languages** (English, French or Spanish) by pressing simultaneously on the * and # keys.

To avoid any loss of power and ensure continued, smooth operation of the motorized unit, the control panel will automatically shut down after 3 minutes of idle time. When operating the motorized unit in extreme cold weather, the control panel will have to be preheated before startup.

To avoid causing serious damage to the control panel, it is **mandatory** to always **start the Honda engine before turning on the control panel**. It is also **mandatory** to shut down the control panel **before** shutting down the engine.

All Hydro Mobile control panels are identical and can be interchanged. The user must enter a four-digit code (operator code) to operate the control panel. The user code is the only code that allows operating the control panel. The default user code is "1234". To change the default user code, contact the distributor or the Hydro Mobile technical support team.

It is **mandatory** to lock the control panel to prevent any unauthorized operation of the motorized unit. To **lock the control panel**, press any key, and then enter the four-digit user code. The control panel LED screen will display the "USER PASSIVE" message. To reactivate the panel, press any key, and then enter the four-digit user code again. Shutting down the panel will not lock it automatically: the four-digit user code must be entered to lock the panel.

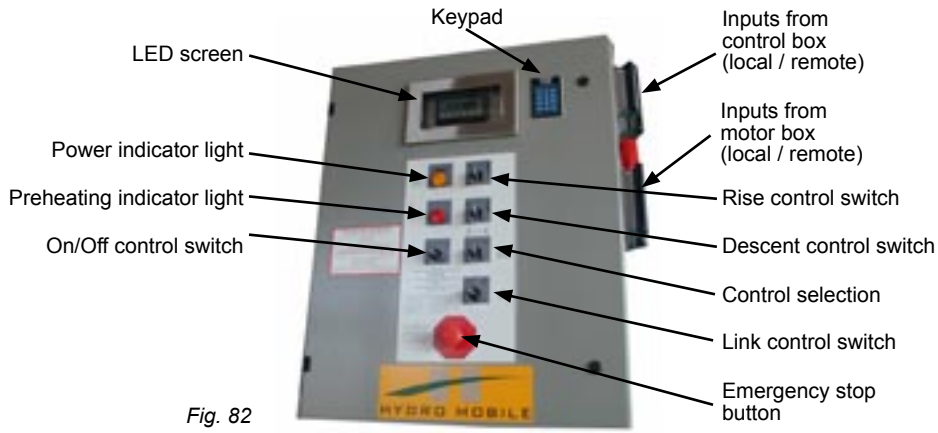


Fig. 82

WARNING
To avoid causing serious damage to the control panel, it is **mandatory** to always **start the Honda engine before turning on the control panel**. It is also important to shut down the control panel **before** shutting down the engine.

Control Panel (cont'd)

Control Panel Controls	
Control	**Description**
Power indicator light	Indicates if control panel is powered on.
On/Off control switch	Turn to "On" position (right) to power up the panel. Turn to "Off" position (left) to power off the panel.
Preheating indicator light	When the light is on, the control panel is too cold to operate and is in preheating state. If the control panel shuts down after 3 minutes of idle time, turn the On/Off switch to the "On" position. Repeat this operation as necessary until the preheating light goes off and the panel is ready to operate.
Rise control switch [(1)]	Turn left and hold for first speed. Turn right and hold for second speed.
Descent control switch [(1)]	Turn left and hold for first speed. Turn right and hold for second speed.
Control selection	This switch is disabled when the link control switch is in the "linked" position. In a bearing bridge configuration, use this switch to control each end of the platform independently or both together (local / remote). **L= local** **R= remote** **L+R= local and remote**
Link control switch	This switch is a safety device to ensure that the trolley link is in place. With the trolley link in place, switching to "unlinked" will result in an error message. **L= linked** **NL= not linked (unlinked)**
Emergency stop button	Shuts down the power pack and the engine.

(1) At second speed, the control panel will automatically switch to first speed if the unit reaches a -3 or +3 level reading; the control panel will stop operating if the unit reaches a -5 or +5 level reading (see the *Pendulum* section for more information).

Fig. 83

WARNING
If the platform reaches a -5 or +5 level reading, it **must be raised or lowered immediately** to a -3, +3 or 0 level reading **before** the control panel shuts down. Failure to do so will result in an error message when turned on again and the control panel **will not operate.**

WARNING
Pushing the emergency stop button **will only turn off the engine**. Make sure to **also** turn off the ignition key so as not to drain the battery. The control panel will shut down automatically after 3 minutes of idle time.

Control Panel (cont'd)

List of Event Alarms on the Control Panel

Message	Description	Platform will stop						Light	Audible alarm	Action to be performed	Where
		Descent			Rise						
		2nd speed	1st speed		2nd speed	1st speed					
BFL(L)	Faulty bottom final limit switch (LOCAL)	●	●					●	●	1. Call the distributor or the Hydro Mobile technical support team 2. Repair LOCAL bottom final limit switch	Bottom of main trolley
BFL(R)	Faulty bottom final limit switch (REMOTE)	●	●					●	●	1. Call the distributor or the Hydro Mobile technical support team 2. Repair REMOTE bottom final limit switch	Bottom of main trolley
BL(L)	Bottom limit Platform is at lowest level (LOCAL)	●	●					●	●	Raise the platform	
BL(R)	Bottom limit Platform is at lowest level (REMOTE)	●	●					●	●	Raise the platform	
BPF(L)	Brake pressure (LOCAL)	●	●		●	●		●	●	1. Check engine RPM (should be 3600 RPM) 2. Check if hydraulic components are properly hooked up 3. Check wiring of pressure switch 4. Call the distributor or the Hydro Mobile technical support team	Top of the upper drive (pressure switch)
BPF(R)	Brake pressure (REMOTE)	●	●		●	●		●	●	1. Check engine RPM (should be 3600 RPM) 2. Check if hydraulic components are properly hooked up 3. Check wiring of pressure switch 4. Call the distributor or the Hydro Mobile technical support team	Top of the upper drive (pressure switch)
CB(L)	Control box connector unplugged (LOCAL)	●	●		●	●			●	1. Check control box connection 2. Hook up control box connector properly	Control box is on main frame (top of upper drive) and connects to control panel
CB(R)	Control box connector unplugged (REMOTE)	●	●		●	●			●	1. Check control box connection 2. Hook up control box connector properly	Control box is on main frame (top of upper drive) and connects to control panel
DF(L)	Door fault (LOCAL)	●	●		●	●			●	1. Check all doors and make sure they are properly closed 2. Check bridge link guardrail doors and make sure hinge flaps push down on limit switches 3. Check switches for malfunction 4. Replace switches if necessary 5. Call the distributor or the Hydro Mobile technical support team	Bridge link guardrail door limit switch is on top of main trolley; wall tie door limit switch is on main trolley
DF(R)	Door fault (REMOTE)	●	●		●	●			●	1. Check all doors and make sure they are properly closed 2. Check bridge link guardrail doors and make sure hinge flaps push down on limit switches 3. Check switches for malfunction 4. Replace switches if necessary 5. Call the distributor or the Hydro Mobile technical support team	Bridge link guardrail door limit switch is on top of main trolley; wall tie door limit switch is on main trolley

Fig. 84

List of Event Alarms on the Control Panel

Message	Description	Platform will stop				Light	Audible alarm	Action to be performed	Where
		Descent		Rise					
		2nd speed	1st speed	2nd speed	1st speed				
HT(L)	High temperature (LOCAL)	●	●	●	●	●	●	1. Check oil temperature and let cool if too high 2. Make sure thermostatic fan is working 3. Check wiring and BR3 breaker in motor box 4. Check probe for malfunction	Oil temperature probe and oil level gauge are on oil tank in power pack bridge
HT(R)	High temperature (REMOTE)	●	●	●	●	●	●	1. Check oil temperature and let cool if too high 2. Make sure thermostatic fan is working 3. Check wiring and BR3 breaker in motor box 4. Check probe for malfunction	Oil temperature probe and oil level gauge are on oil tank in power pack bridge
LF	Link fault	●	●	●	●		●	1. Make sure link switch of control panel is in proper position 2. Check if adjustment of proximity switch to detect link frame is correct; if light is on, switch is working properly; if light is not on, bring proximity switch closer to metal (1/8" of gap between proxy and metal)	Proximity switch is on bottom right-hand side of main trolley
MB(L)	Motor box connector unplugged (LOCAL)	●	●	●	●		●	1. Check motor box connection 2. Hook up motor box connector properly Make sure at least **local** side is hooked up properly	Motor box is on power pack bridge and connects to lower side of control panel
MB(R)	Motor box connector unplugged (REMOTE)	●	●	●	●		●	1. Check motor box connection 2. Hook up motor box connector properly Make sure at least **local** side is hooked up properly	Motor box is on power pack bridge and connects to lower side of control panel
OL(L)	Oil level (LOCAL)	●	●	●	●	●	●	Check hydraulic oil level	Oil level gauge is on oil tank on power pack bridge
OL(R)	Oil level (REMOTE)	●	●	●	●	●	●	Check hydraulic oil level	Oil level gauge is on oil tank on power pack bridge
OW(L)	Overload (LOCAL)			●	●		●	1. Check load distribution and capacity charts 2. Check Top Final Limit (TFL) event in this table Note: OW and TFL are wired together; both must be checked	Pressure switch is at bottom of upper drive
OW(R)	Overload (REMOTE)			●	●		●	1. Check load distribution and capacity charts 2. Check Top Final Limit (TFL) event in this table Note: OW and TFL are wired together; both must be checked	Pressure switch is at bottom of upper drive
P+3(L)	+3 degrees level detection (LOCAL)	●						1. Make visual check of platform 2. Lower local side or raise remote side	Pendulum is in pendulum box on intermediate frame
P+3(R)	+3 degrees level detection (REMOTE)	●						1. Make visual check of platform 2. Lower remote side or raise local side	Pendulum is in pendulum box on intermediate frame

Fig. 85

List of Event Alarms on the Control Panel

Message	Description	Platform will stop				Light	Audible alarm	Action to be performed	Where
		Descent		Rise					
		2nd speed	1st speed	2nd speed	1st speed				
P+5(L)	+5 degrees detection (LOCAL)	●	●			●	●	1. Make sure pendulum is free to operate 2. Lower local side or raise remote side	Pendulum is in pendulum box on intermediate frame
P+5(R)	+5 degrees detection (REMOTE)	●	●			●	●	1. Make sure pendulum is free to operate 2. Lower remote side or raise local side	Pendulum is in pendulum box on intermediate frame
P-3(L)	-3 degrees level detection (LOCAL)			●				1. Make visual check of platform 2. Make sure pendulum is free to operate	Pendulum is in pendulum box on intermediate frame
P-3(R)	-3 degrees level detection (REMOTE)			●				1. Make visual check of platform 2. Make sure pendulum is free to operate	Pendulum is in pendulum box on intermediate frame
P-5(L)	-5 degrees level detection (LOCAL)			●	●	●	●	1. Make sure pendulum is free to operate 2. Raise local side or lower remote side	Pendulum is in pendulum box on intermediate frame
P-5(R)	-5 degrees level detection (REMOTE)			●	●	●	●	1. Make sure pendulum is free to operate 2. Raise remote side or lower local side	Pendulum is in pendulum box on intermediate frame
PB(L)	Pendulum box connector unplugged (LOCAL)	●	●	●	●		●	1. Check pendulum box connection 2. Hook up pendulum box connectors properly 3. Make sure pendulum is free to operate 4. Turn on control panel and move pendulum manually: both proximity switches should light up	Pendulum box is on intermediate frame and connects at bottom of control box
PB(R)	Pendulum box connector unplugged (REMOTE)	●	●	●	●		●	1. Check pendulum box connection 2. Hook up pendulum box connectors properly 3. Make sure pendulum is free to operate 4. Turn on control panel and move pendulum manually: both proximity switches should light up	Pendulum box is on intermediate frame and connects at bottom of control box
TFL(L)	Faulty top final limit switch (LOCAL)			●	●	●	●	1. Lower motorized unit 2. Check if adjustment of proximity switch to detect top of mast head is correct; if light is on, switch is working properly; if light is not on, bring proximity switch closer to highest bar (1/8" of gap between proxy and highest bar) 3. Check Overload (OW) event in this table 4. Check wiring in control box and replace switch if necessary Note: TFL and OW are wired together; both must be checked	Proximity switch is on top right-hand side of main trolley
TFL(R)	Faulty top final limit switch (REMOTE)			●	●	●	●	1. Lower motorized unit 2. Check if adjustment of proximity switch to detect top of mast head is correct; if light is on, switch is working properly; if light is not on, bring proximity switch closer to highest bar (1/8" of gap between proxy and highest bar) 3. Check Overload (OW) event in this table 4. Check wiring in control box and replace switch if necessary Note: TFL and OW are wired together; both must be checked	Proximity switch is on top right-hand side of main trolley
TL(L)	Top limit detection (LOCAL)			●	●			1. Lower motorized unit 2. Check if adjustment of proximity switch to detect top of mast head is correct; if light is on, switch is working properly; if light is not on, bring proximity switch closer to highest bar (1/8" of gap between proxy and highest bar) 3. Check wiring in control box and replace switch if necessary	Proximity switch is on top left-hand side of main trolley
TL(R)	Top limit detection (REMOTE)			●	●			1. Lower motorized unit 2. Check if adjustment of proximity switch to detect top of mast head is correct; if light is on, switch is working properly; if light is not on, bring proximity switch closer to highest bar (1/8" of gap between proxy and highest bar) 3. Check wiring in control box and replace switch if necessary	Proximity switch is on top left-hand side of main trolley

Fig. 86

Pendulum

The pendulum is in a box (fig. 87) located on the intermediate frame and is linked to the control panel through the control box. In a **bearing** configuration, this device helps to **control the level of the platform.** The proximity switches in the pendulum box trigger level reading messages to the operator on the control panel (see the *Control Panel* section, p. 39).

Bearing configuration

1- Make sure the pendulum box is properly connected to the control box (see the *Electrical Hookups* section, p. 31).
2- Remove the transport screw (fig. 88) and make sure the pendulum is free to operate. It is **mandatory** to use the pendulum in a bearing configuration.
3- When the motorized unit is in operation, if the pendulum moves toward the unit, it will detect a slope of +3 or +5; if the pendulum moves away from the unit, it will detect a slope of -3 or -5.
4- If the control panel indicates a -5 or +5 level reading (see the *List of Event Alarms on the Control Panel* table, p. 41), the platform must be raised or lowered **immediately** at one end until the panel gives **at least** a -3 or +3 level reading.
5- Failure to restore the level of the platform **before** the control panel shuts down (after 3 minutes of idle time) will result in an error message once the control panel is turned on again. In this event, the operator must use the emergency descent control system (see the *Emergency Descent Control System* section, p. 46) to reposition the platform until it is level.
6- If the pendulum is defective, the proximity switches will not send any signal to the control panel and the motorized unit **will not operate**.

Cantilever configuration, transport and setup modifications

1- Using the thumbscrew (transport screw, fig. 88), lock the pendulum in position in a cantilever configuration, for setup modifications or transport of the motorized unit.
2- For setup modifications make sure that the pendulum box is unplugged from the control box if the intermediate frame needs to be removed.

Fig. 87 Pendulum box

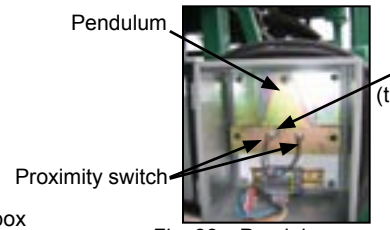


Fig. 88 Pendulum

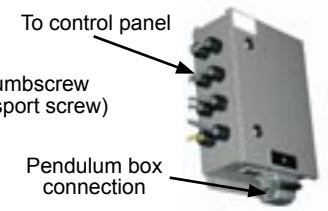


Fig. 89 Control box

WARNING
If the platform reaches a -5 or +5 level reading, one end of the motorized unit **must be raised or lowered immediately** to a -3, +3 or 0 level reading **before** the control panel shuts down. Failure to do so will result in an error message when the control panel is turned on again and the motorized unit **will not operate.**

Masts and Mast Head

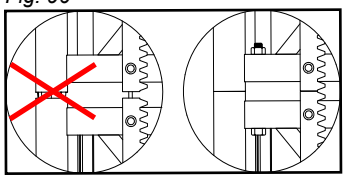
Installation

1- Make sure that the motorized unit is positioned properly. Refer to the *Positioning the Motorized Unit* section on p. 12 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. 91).
4- Using the jib arm (see the *Jib Arm* section, p. 60), raise the next mast section and insert it on top of the bottom mast section. It is recommended to handle mast sections carefully so as not to damage the mast rack.
5- Make sure the rack on the mast section is sufficiently greased.
6- Make sure the masts are properly connected together (fig. 90).
7- Install the appropriate nut and bolt assemblies (4) making sure the bolt heads are facing the ground (fig. 91).
8- Tighten all bolt assemblies to secure the mast section in place.
9- Repeat steps 3 through 8 for each mast section.
10- Install the mast head on top of the last mast section and keep it in place until dismantling the setup.

Transport

1- Mast sections must be handled carefully so as not to damage the mast rack.
2- Mast sections can be stored vertically or horizontally, lying on the side opposite to the mast 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.
4- Mast sections can be transported vertically or horizontally, lying on the side opposite to the mast rack.

Fig. 90



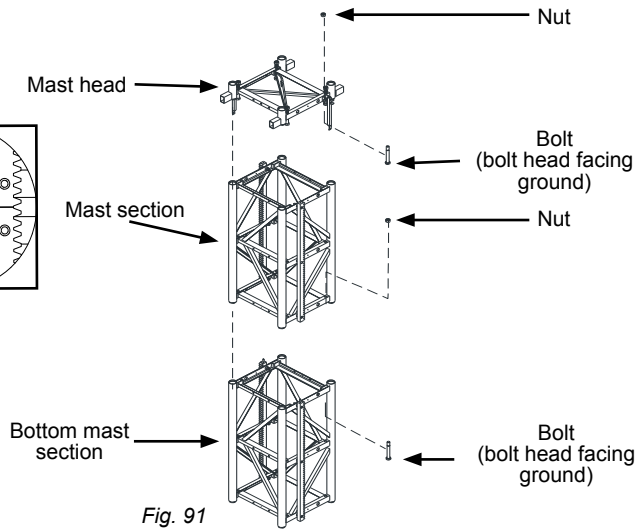


Fig. 91

Emergency Descent Control System

In the event of engine failure due to a shortage of fuel, broken parts or any other reason, use the emergency descent control system to level the platform or bring the motorized unit safely down to ground level.

For model F1033, perform each of the following steps **simultaneously** on either side of the mast.

Emergency engine startup procedure

1- Make sure the 24 HP engine is shut down. Open the power pack bridge access door (fig. 75, p. 36).
2- Move the 6.5 HP emergency engine fuel valve lever to the “ON” position.
3- Pull out the choke handle to the closed position.
4- Pull out the throttle handle about halfway.
5- Pull the emergency engine kill switch to the “ON” position to start the engine.
6- Pull start the emergency engine.
7- Slowly push down the choke handle all the way to the open position.
8- Adjust engine speed by pulling the throttle handle up to reach maximum RPM and lock it.

Emergency descent procedure

1- Using the emergency descent tool (fig. 92, inset), push in and hold in the depression on the end of the red valve (fig. 93) until the motorized unit has safely reached ground level, for an emergency descent, or until the platform is back on level, in case of a level reading alarm on the control panel.
2- In the case of an emergency descent in a bearing configuration, make sure that the platform is always at level as the motorized unit is going down.

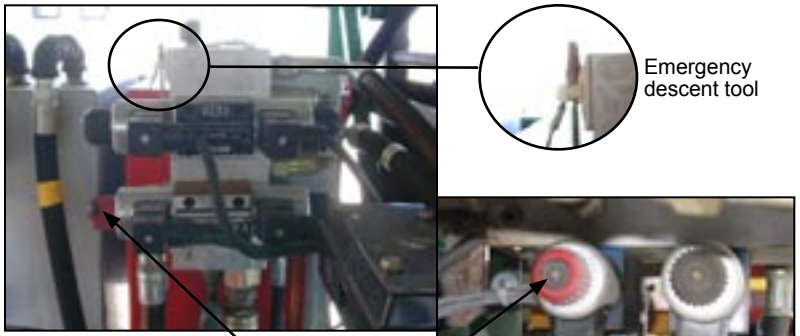


Fig. 92

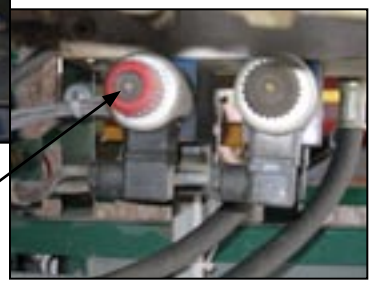


Fig. 93

WARNING
For model F1033, it is imperative that each step of the emergency descent procedure be performed **simultaneously** on either side of the mast.

Wall Ties

Wall Tie Schedule

	No Freestanding Allowed		Freestanding Allowed
			
Wall tie height ft (m)	**Base pedestal**	**Base pedestal with extension**	**Mobile chassis** (to be used for freestanding installation only)
Freestanding	N/A	N/A	40' (12.2 m)
A	10' (3 m)	20' (6.1 m)	40' (12.2 m)
B	20' (6.1 m)	30' (9.1 m)	45' (13.7 m)
C	30' (9.1 m)	45' (13.7 m)	45' (13.7 m)
D	45' (13.7 m)	45' (13.7 m)	45' (13.7 m)
	Pre-installation of wall ties is mandatory		

Fig. 94

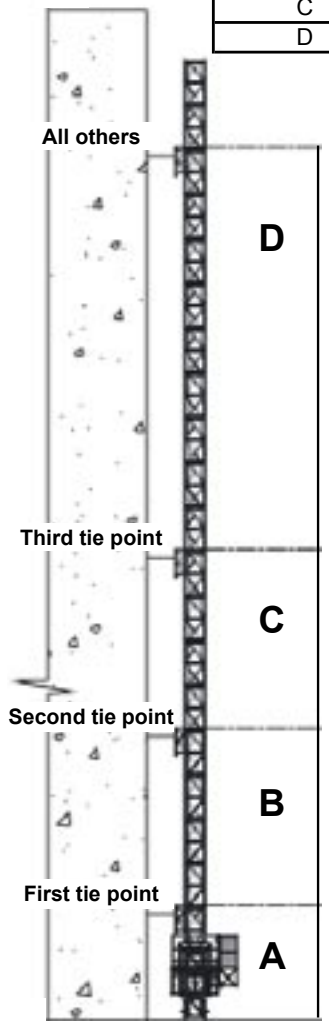


Fig. 95

WARNING

- The motorized unit cannot be used in a freestanding configuration, except when using a mobile chassis with end outriggers fully extended (see the *Mobile Chassis* section, p. 61).

- 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 of the Hydro Mobile technical support team.

- 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.

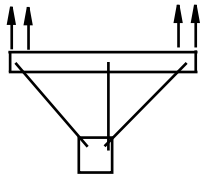
- When using weather protection, it is **mandatory** to pre-install wall ties and to make sure that the platform is never raised beyond the last wall tie point.

Wall Ties (cont'd)

Anchor installation

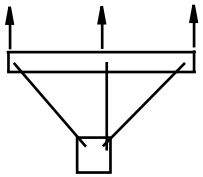
Before attaching masts to the building using the wall tie system, anchors must be installed on a solid component of the building structure. Concrete slabs, columns, steel beams, relief angles and other structural elements can be used provided they can sustain 3000 lb (1360 kg) of tension / compression and 1000 lb (455 kg) of shear force.

Anchoring options (with long anchor)



A

Fig. 96



B

Fig. 97

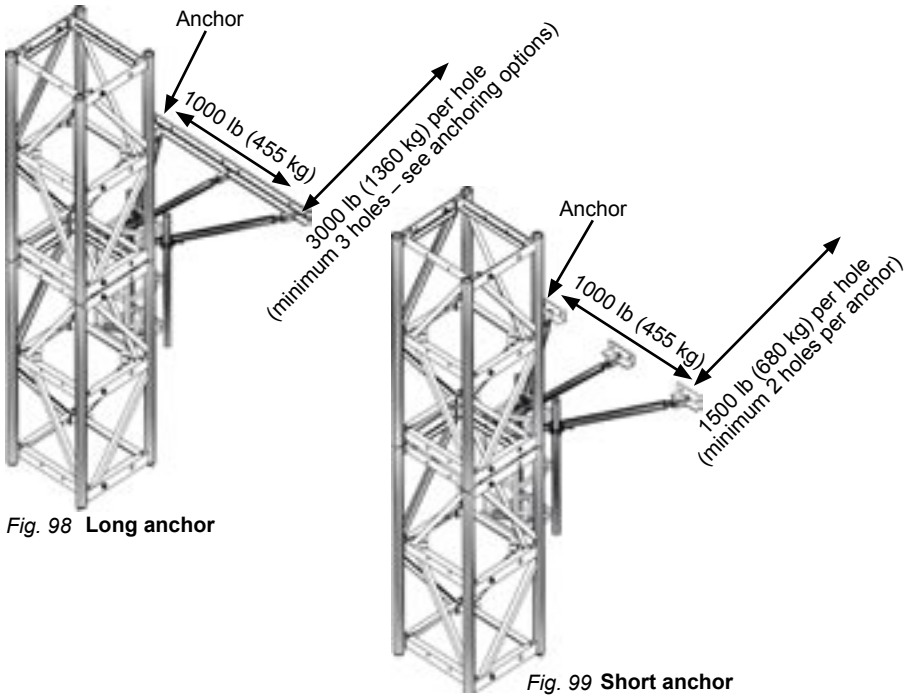


Fig. 98 **Long anchor**

Fig. 99 **Short anchor**

WARNING
Each anchor must be capable of withstanding 3000 lb (1360 kg) of tension / compression and 1000 lb (680 kg) of shear force.

Wall Ties (cont'd)

Wallmount installation

1- Align the wall tie frame holes with the ones on the mast. Bolt the wall tie frame to the mast using 1/2" x 1 1/2" bolts (4) and 1/2" nuts (4).
2- Choose the appropriate anchor. Each anchor must be capable of withstanding 3000 lb (1360 kg) of tension / compression per hole for a long anchor and 1500 lb (680 kg) of tension / compression per hole for a short anchor, and 1000 lb (455 kg) of shear force (any type of anchor).
3- Attach the anchor to the wall.
4- Using the wallmount pin, attach the wallmount to the anchor, 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 (fig. 104). Make sure that the bolt is tightened.
6- Attach the wallmount to the dual clamp on the wall tie frame. Make sure that the bolt is tightened.
7- For added strength, attach additional dual clamps on the wallmount in front and in the back of the wall tie frame dual clamp installed previously (fig. 105). Make sure all bolts are tightened. Refer to the *Installation of dual clamps* procedure, on p. 50, for more information.
8- Adjust the length of the adjustment rod until the mast is plumb on both the front and side axis.
9- Repeat steps 1 through 8 for each wallmount.

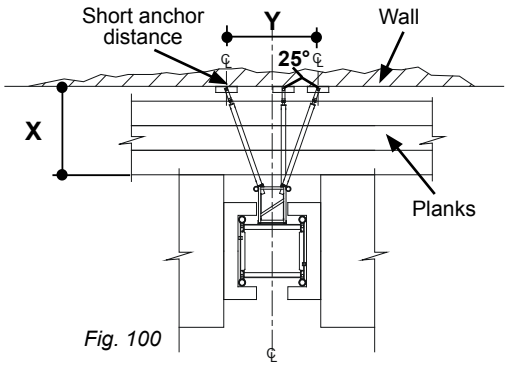


Fig. 100

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" (61cm)	2
36" (91.4 cm)	34" (86.4 cm)	3

The "Y" anchor distances are given only as a reference. Tolerance rate is of ± 2" (5 cm)

Fig. 101

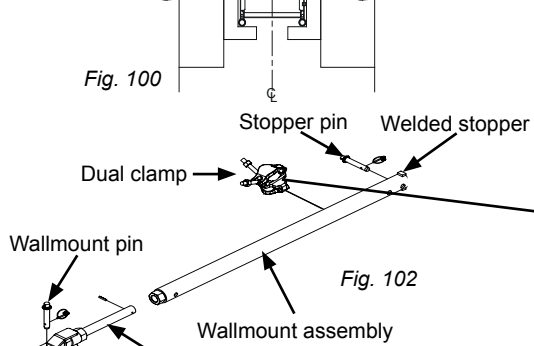


Fig. 102

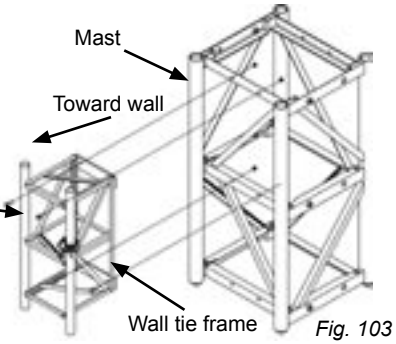


Fig. 103

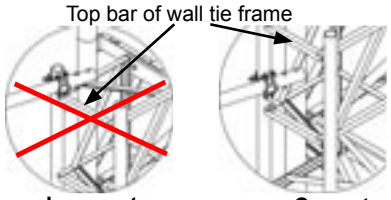


Fig. 104

Incorrect **Correct**

Wall Ties (cont'd)

Installation of dual clamps

In a configuration using 3 planks or more, back extensions or long outriggers, the tension / compression factor is highly increased. In such situations, it is **mandatory** to attach an additional dual clamp **inside the wall tie frame**, to reduce the tension, and **outside** the wall tie frame, to reduce the compression and to prevent inward and outward movements of the wall tie frame.

1- Install the first dual clamp on the vertical tube of the wall tie frame below the top bar (fig. 104). 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. 106). 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. 106).

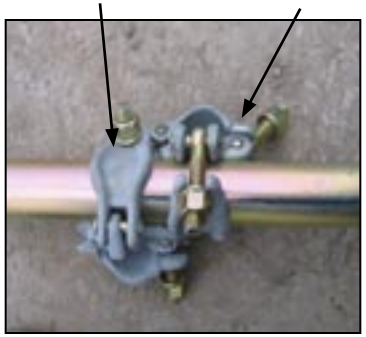


Fig. 105

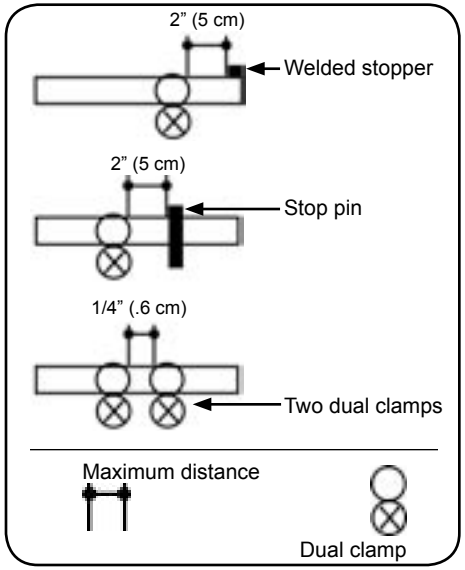


Fig. 106

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 (mobile chassis only) when wind speed exceeds 29 mph (46 km/h).

Bearing Capacities – (lb)
(for metric equivalencies, see page 53)

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 weight capacities of the motorized unit(s) should be observed. Overloading a mast climbing work platform system could result in serious injury or death.

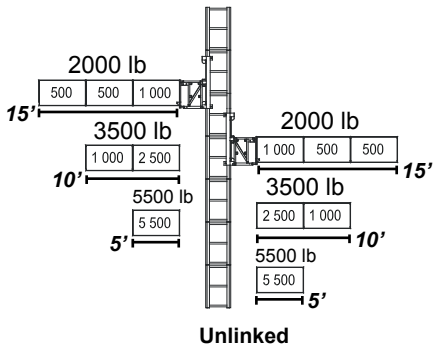


Fig. 107

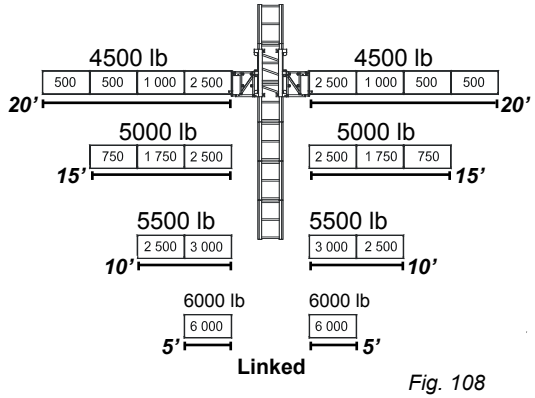
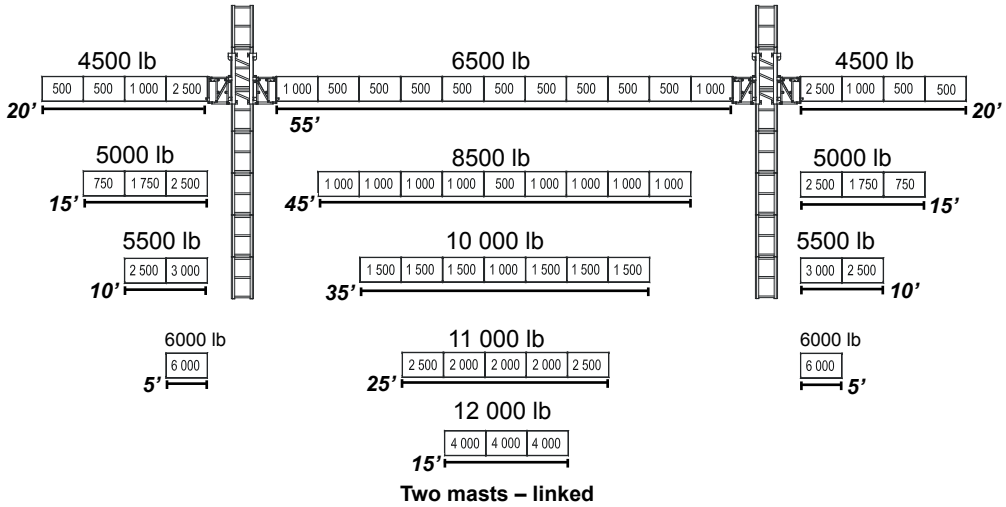


Fig. 108



LEGEND

Bridge – 5' (1.5 m)

45' Length of bridge setup

Bearing Capacities – (lb)
(for metric equivalencies, see page 54)

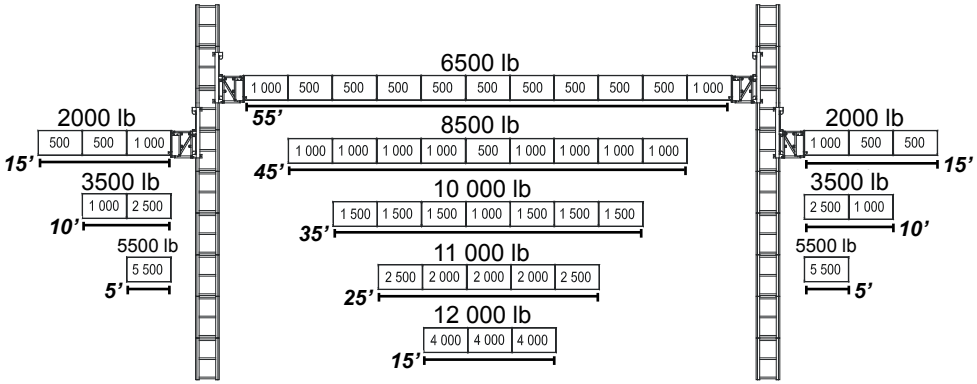


Fig. 110 **Two masts – unlinked**

LEGEND

Bridge – 5' (1.5 m)

45' Length of bridge setup

NOTES

1- The weight of planks and any additional accessory being used must be deducted from the bearing capacities shown above, and in the previous and 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 bearing capacities shown above.

4- It is recommended to have a minimum of two (2) workers for each of the configurations shown above 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 bearing capacity of that area.

NOTE

The Hydro Mobile F Series can be set up in several configurations (extended-reach, corner, etc.) other than those illustrated above and on the previous and following pages. Contact Hydro Mobile for information about configuration possibilities.

Bearing Capacities – (kg)
(for imperial equivalencies, see page 51)

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 weight capacities of the motorized unit(s) should be observed. Overloading a mast climbing work platform system could result in serious injury or death.

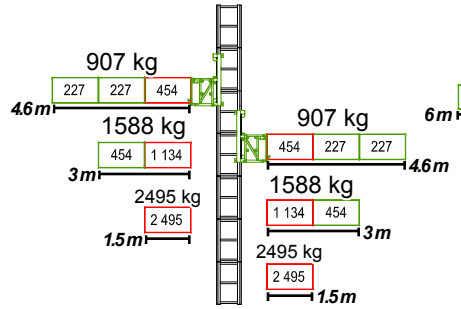


Fig. 111 **Unlinked**

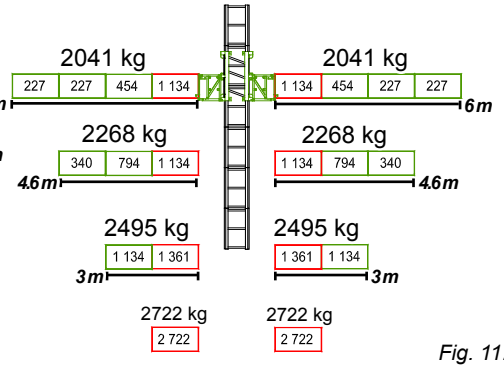


Fig. 112

Linked

Fig. 113

Two masts – linked

LEGEND

Bridge – 5' (1.5 m)

45' Length of bridge setup

Bearing Capacities – (kg)
(for imperial equivalencies, see page 52)

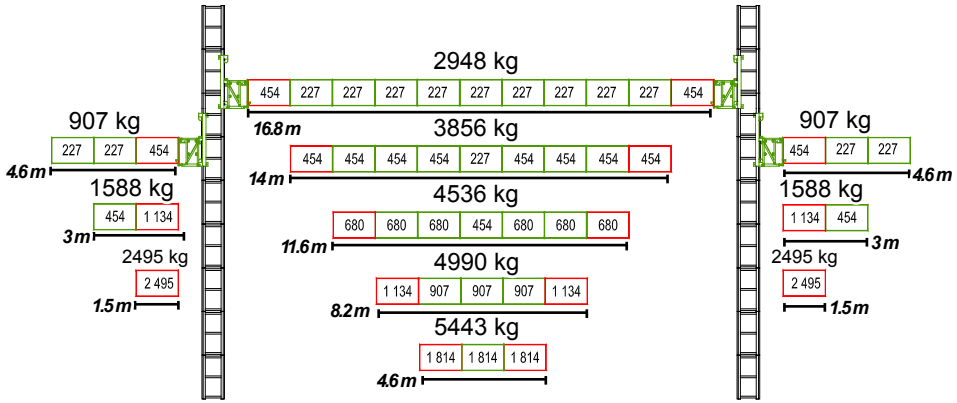


Fig. 114

Two masts – unlinked

LEGEND

Bridge – 5' (1.5 m)

45' Length of bridge setup

NOTES

1- The weight of planks and any additional accessory being used must be deducted from the bearing capacities shown above, and in the previous and 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 bearing capacities shown above.

4- It is recommended to have a minimum of two (2) workers for each of the configurations shown above 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 bearing capacity of that area.

NOTE

The Hydro Mobile F Series can be set up in several configurations (extended-reach, corner, etc.) other than those illustrated above and on the previous and following pages. Contact Hydro Mobile for information about configuration possibilities.

Bearing Capacities – Swivel Bridges and Forward Extensions

Swivel bridges

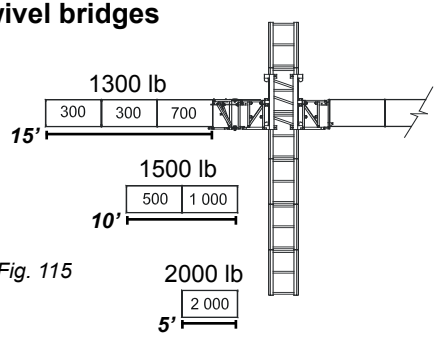


Fig. 115

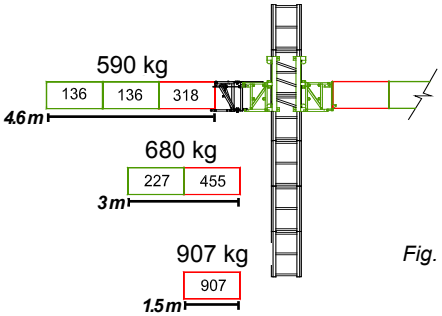


Fig. 116

Swivel bridge

Fig. 117

The swivel bridge can be used in four different configurations, and bearing capacities are as illustrated in the table below.

Configuration	Reference for bearing capacities
Angle cantilever (up to a 45° angle) **OR** Standard cantilever (no rotation)	Refer to capacities illustrated in fig. 115 or 116
Angle bearing (up to a 45° angle) **OR** Standard bearing (no rotation)	Refer to bearing capacities illustrated on pp. 51 to 53

Fig. 118

Forward extensions

Maximum capacity of 500 lb (227 kg)

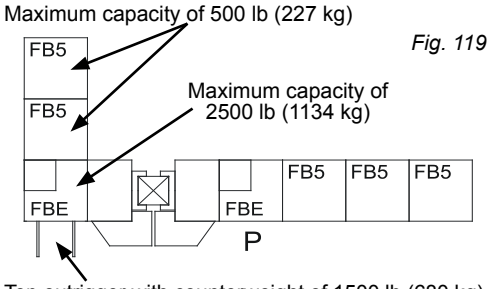


Fig. 119

Fig. 120

Maximum capacity of 500 lb (227 kg)

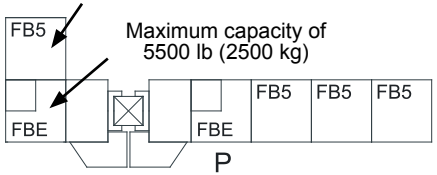


Fig. 122

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

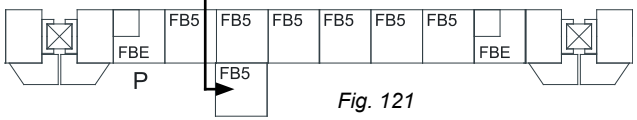


Fig. 121

For the bearing capacities of the configurations of the F Series forward extension shown in fig. 119, 121 and 122, refer to the unlinked capacity charts illustrated in fig. 110 and 114. It is important to note that the weight of any additional bridge installed must be deducted from the bearing capacities illustrated above and in the previous pages. For any configuration other than those illustrated above, contact the distributor or the Hydro Mobile support team.

Outriggers

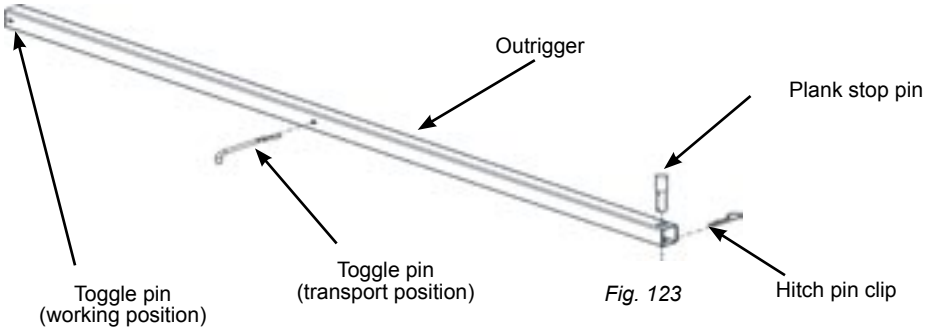


Fig. 123

WARNING
In a standard planking configuration (2 or 3 planks), each outrigger has a maximum bearing capacity of 500 lb (227 kg).

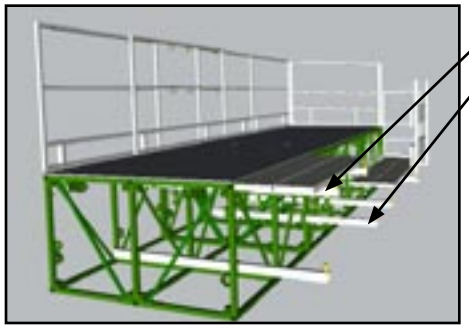


Fig. 124

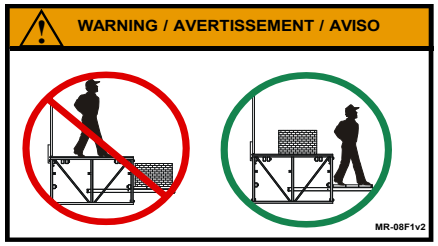


Fig. 125

Plank support outriggers must be installed at least every 5’ (1.5 m).

Face guardrails 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.

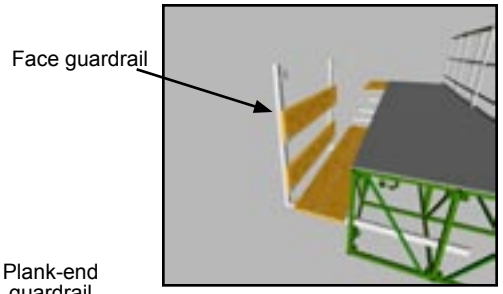
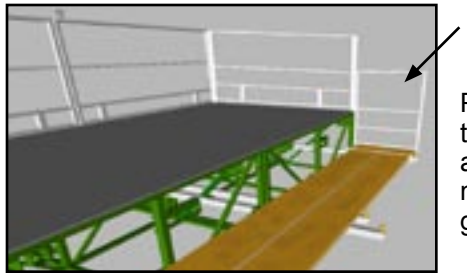


Fig. 126

Fig. 127



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

Guardrails

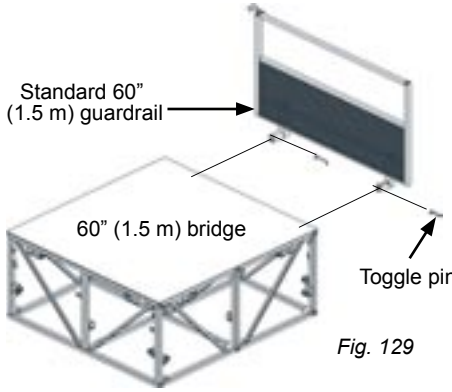


Fig. 129

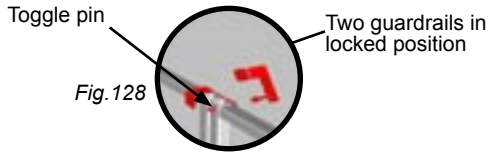


Fig.128

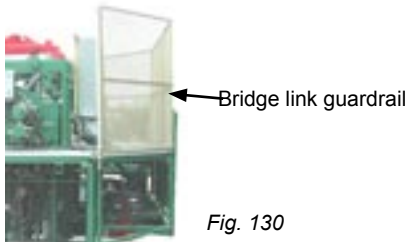


Fig. 130

WARNING
Always install the toggle pins (2) to secure the guardrail to the bridge.

Removable Guardrails
(optional)

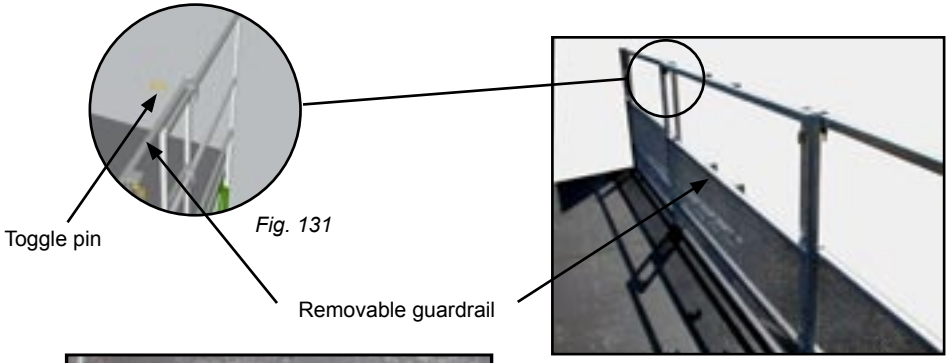


Fig. 131

Fig. 132

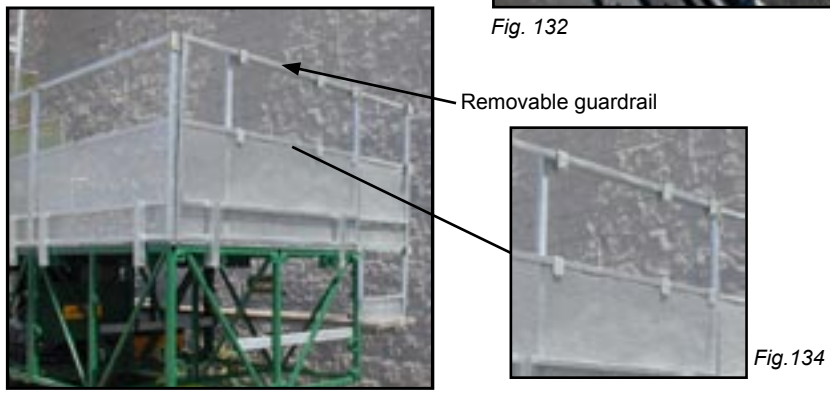


Fig. 133

Fig.134

Doors and Mast Guards

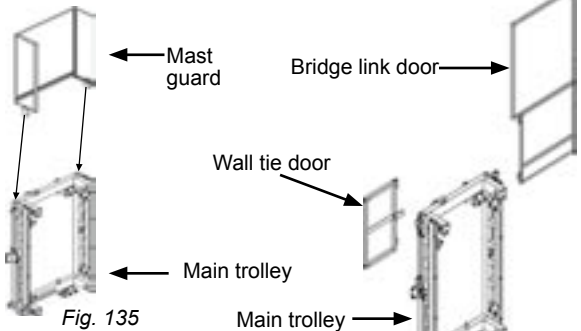


Fig. 135

Fig. 138

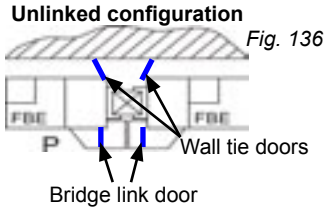


Fig. 136

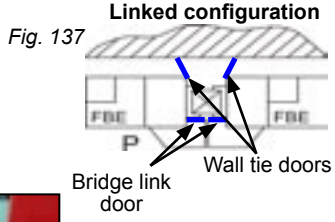


Fig. 137

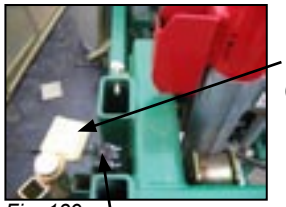


Fig. 139

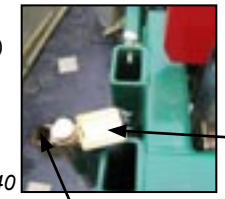


Fig. 140

Wall tie doors

The F Series is shipped with wall tie doors already installed on the front part of the motorized unit (fig. 138 and fig. 2, p. 6).

Mast guards

Insert the mast guards into the designated pockets on top of the main trolley (fig. 135) and secure with thumbscrews.

Bridge link doors

The F Series bridge link doors act as an additional mast guard when used in a linked configuration (fig. 137). On model F1033, the bridge link doors are used in an unlinked configuration to prevent workers from crossing from one side of the mast to the other.

Installation in a linked configuration

1- Insert the bridge link door into the hinge tube so that it is parallel to the mast (fig. 137) and secure with pins. Repeat for the second bridge link door.

Installation in an unlinked configuration

1- Insert the bridge link door into the hinge tube at a 90º angle with the mast (fig. 136) and secure with pins. Repeat for the second bridge link door.
2- The bridge link door hinge flap must be over the limit switch for the motorized unit to operate (fig. 140).
3- Opening the bridge link door in an unlinked configuration will automatically stop the motorized unit and trigger a door fault (DF) message on the control panel (see the *Control Panel* section, p. 39).

Access Stairs
(optional)

1- Install the guardrail door using toggle pins (2).
2- Insert the top part of the stairs into the top outrigger pockets.
3- Secure in place using pocket bolts and toggle pins (2).
4- Unfold the stair brace.
5- Using toggle pins (2), secure the stair brace to the bottom truss of the bridge.
6- Using toggle pins (2), install the stairs handrail.

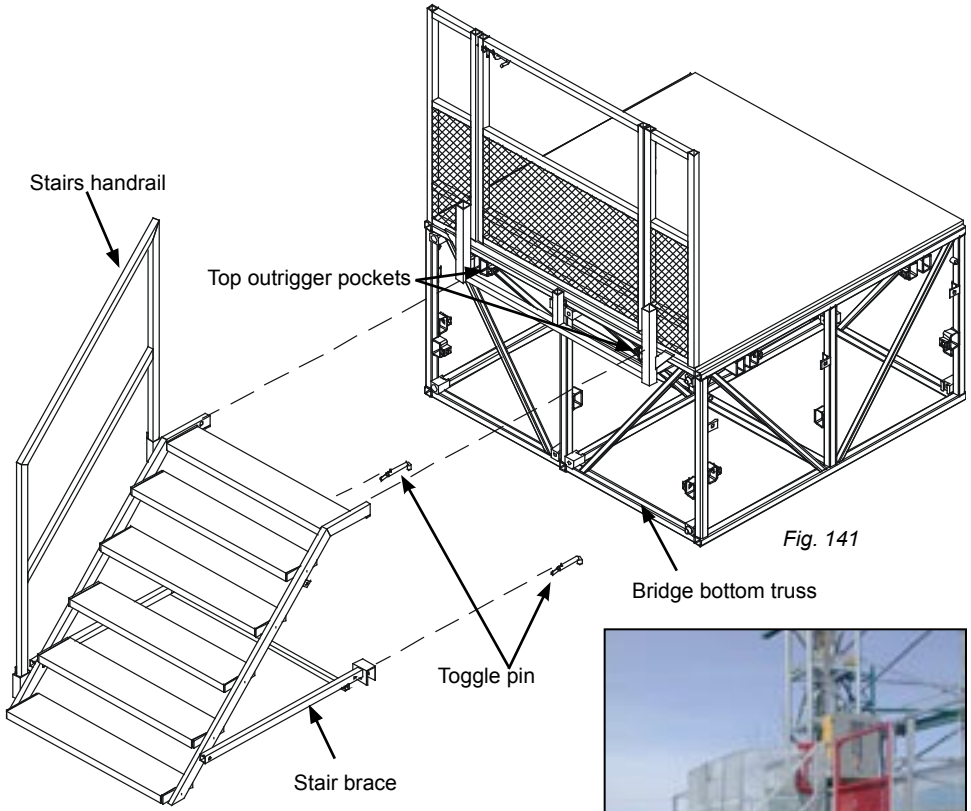


Fig. 141

Fig. 142

WARNING
Access stairs can only be used when the motorized unit is at ground level.

Jib Arm

The F Series is equipped with a jib arm to help install or remove mast sections. This jib arm has a maximum lifting capacity of 500 lb (226 kg). The jib arm must not be used to lift any material other than **one mast section at a time**.

1- With the motorized unit at ground level, make sure that the bridge link is properly bolted to the main frame.
2- Remove the toggle pin under the bridge link and lift the cover plate of the jib arm holder on the bridge link (fig. 145).
3- Pull the jib arm out of its storage location (fig. 143).
4- Pull the mast handler out of its storage location and attach it to the top of the jib arm (fig. 145).
5- Slide the jib arm assembly into the jib arm holder until it rests completely on the stopper bolt inside the bottom pocket (fig. 144).
6- 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 the *Masts and Mast Head* section, on p. 45).
7- Remove the mast handler from the top of the mast section **before** raising the platform.
8- Repeat steps 6 and 7 for each mast section to be installed.
9- Once setup is complete and the motorized unit is at ground level, remove the mast handler and the jib arm and return them to their storage location.
10- Replace the cover plate on the bridge link and secure it with the toggle pin.

Fig. 143

Fig. 144

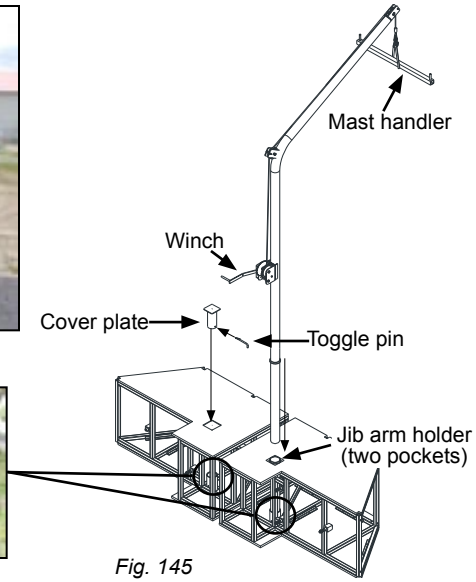


Fig. 145

WARNING
The jib arm has a maximum lifting capacity of 500 lb (226 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.

Mobile Chassis

Standard installation

1- Using the jacks (fig. 146), lift the mobile chassis until its tires barely touch the ground.
2- Extend the four end outriggers on the mobile chassis until the distance between them equals 13' 4" (4 m), as illustrated in fig. 148, on p. 62.
3- Make sure the base of the motorized unit does not have a pedestal extension. With the help of a forklift truck or a crane, lift the motorized unit and lower it on the mobile chassis.
4- Using the appropriate plates (4), bolts (8) and nuts (8) (fig. 147, inset), attach the base of the motorized unit to the mobile chassis.

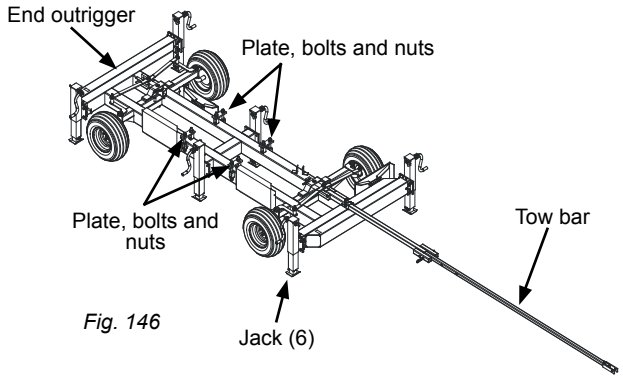


Fig. 146

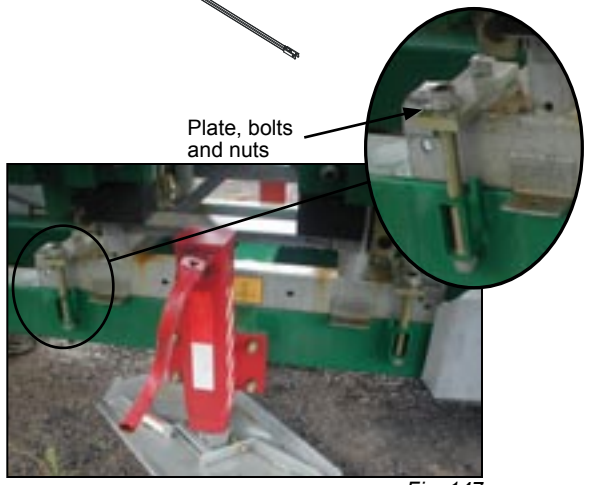


Fig. 147

WARNING
When using a mobile chassis **outdoors**, the maximum freestanding height of setup if 40' (12 m). When using a mobile chassis **indoors** or in a **wind-free** (0 mph) environment, the maximum freestanding height of setup is 55' (17 m). The end outriggers on the mobile chassis must always be extended completely to ensure stability.

Mobile Chassis (cont'd)

Installation using the 90-degree axis adapter (optional)

1- If the motorized unit is already installed on the mobile chassis, remove the bolts and plates assemblies, and lift it off the chassis with the help of a forklift or a crane.
2- If the mobile chassis is already installed, proceed to step 4. Using the jacks (fig. 146), lift the mobile chassis until its tires barely touch the ground.
3- Extend the four end outriggers on the mobile chassis until the distance between them equals 13' 4" (4 m), as illustrated in fig. 148.
4- Bolt the 90-degree axis adapter (fig. 149) to the mobile chassis.
5- With the help of a forklift truck or a crane, lift the motorized unit and lower it in a 90-degree axis on top of the 90-degree axis adapter on the mobile chassis.

Note: For any other configuration using a mobile chassis, contact the distributor or the Hydro Mobile technical support team.

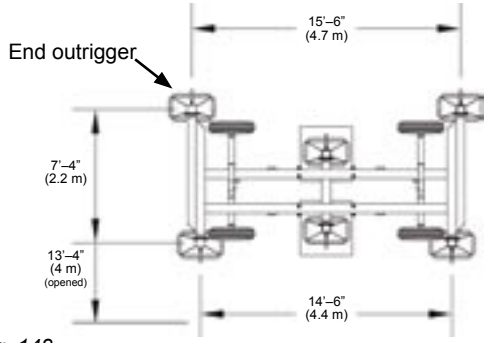


Fig. 148

Top view

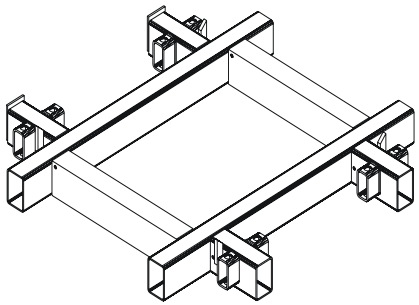


Fig. 149

Moving the mobile chassis

1- Bring the motorized unit to ground level, removing wall ties and mast sections on the way down.
2- Using the jacks (fig. 146), lower the mobile chassis until its tires sit squarely on the ground.
3- Make sure the jacks no longer touch the ground before moving the unit.
4- Using the tow bar, move the mobile chassis to the desired location.
5- Using the jacks, lift the mobile chassis until its tires barely touch the ground and extend the four end outriggers.

Transport and Storage

Transport of the motorized unit

1- Remove the bottom final limit switch (BFL) bracket from the half mast attached to the base pedestal (fig. 150).
2- Lower the platform until it rests on the rubbers (4) mounted on the base pedestal (fig. 151).
3- Push in and lock all outriggers in place.
4- If the motorized unit was used in an unlinked configuration (model F1033 only), make sure to replace the trolley link (see the instructions on how to split a platform in the *Positioning the Motorized Unit* section, on p. 12).
5- Make sure the power pack bridge is properly bolted to the intermediate frame and that the gas levers have both been turned off (see the *Power Pack* section, p. 36). On model F1033, verify both power pack bridges.
6- Remove the movable 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- Open and lock the wall tie doors in an open position (flat against the bottom mast section).
10- Remove the bridge link doors and secure for transport.

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.

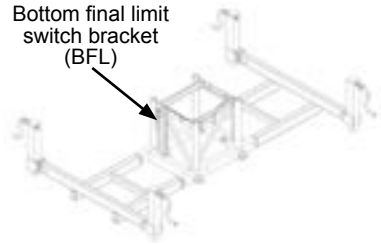


Fig. 150

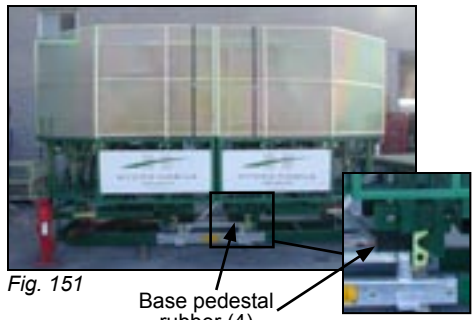


Fig. 151

WARNING
Before transporting or storing a motorized unit, make sure all gas levers have been turned off. Before storing a motorized unit, make sure there is sufficient cribbing under the base pedestal to prevent freezing water from causing damages to the bottom of the structure.

Weather Protection

Installation

1- Install the back part of the frame extension assembly (fig. 153) on the bridge link.
2- Install the front part of the frame extension assembly in the front guardrail pockets.
3- Install the back part of the frame assembly in the guardrail tube at the back of the bridge and the front part in the front guardrail pockets.
4- Install the center frame assembly on top of the frame extension assembly, as illustrated in fig. 153.
5- Install the 88 5/16” (224 cm) X-brace on the back of the trolley link.
6- Install the 90 13/32” (230 cm) X-brace on top of the frame assemblies.
7- Make sure you leave one X-brace out every three bays to allow bridges to deflect without damaging the weather protection.

Weather protection	
Description	**Item code**
Center frame assembly	20006602-0-00000-2
Frame assembly	20006A01-0-00000-3
Frame extension	20006301-0-00000-3
90 13/32" (230 cm) X-brace	A0840000-0005
88 5/16" (224 cm) X-brace	A0840000-0003

Fig. 152

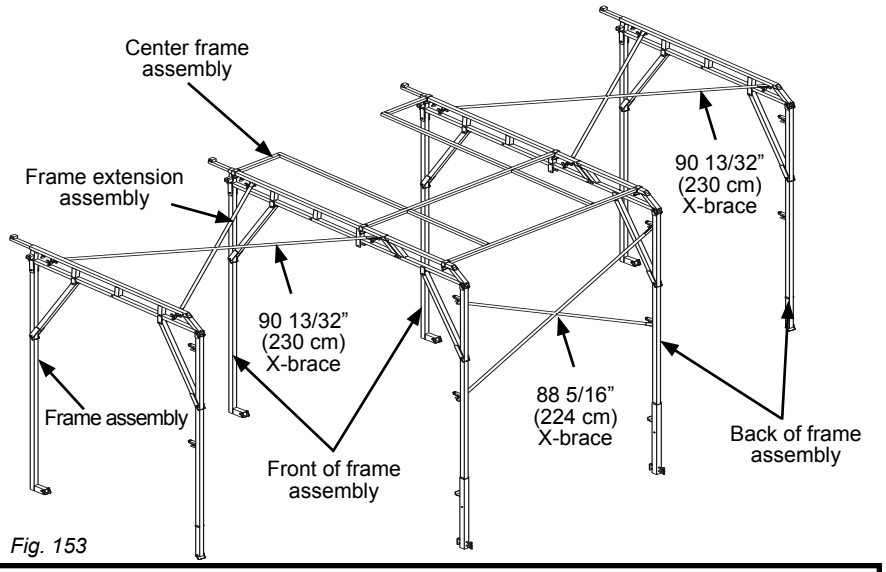


Fig. 153

WARNING
When using weather protection, a mast climbing work platform system cannot be used if wind speed exceeds 29 mph (46 km/h). Wall ties must be pre-installed and the motorized unit cannot overhang the last level of wall ties.

Maintenance

Proper maintenance and service will warrant safe, economical, and trouble-free operation of an F Series motorized unit. The following pages include maintenance schedules and routine inspection procedures. While daily and weekly maintenance operations can be performed by the user, 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 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.

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. 154

WARNING
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 technician.

DAILY		
Honda engines	☐	Perform recommended daily maintenance on 24 HP and 6.5 HP (emergency) engines, as per manufacturer's instructions
Base pedestal	☐	Check solidity and stability of cribbing under base pedestal
	☐	Check stability of jacks on base pedestal extension
Mobile chassis	☐	Check all jacks and make sure the end outriggers are fully extended
	☐	Check stability of chassis
Main trolley	☐	Visually inspect all rollers for misalignment and excessive wear
	☐	Check bolts on top inside rollers and make sure shafts are tightly in place
	☐	Visually inspect the top final limit (TFL) proximity switch: red light indicates it is working properly
	☐	Visually inspect the top limit (TL) proximity switch: will turn red when putting a metal object in front of it
Motor trolley	☐	Visually inspect the pinions and make sure they are clear of debris
	☐	Visually inspect the alignment of pinions with the rack
	☐	Visually inspect all rollers for misalignment and excessive wear
	☐	Visually inspect both buffers for damages and excessive wear

DAILY		
Motor trolley	☐	Visually inspect the pinions and make sure they are clear of debris
	☐	Visually inspect the alignment of pinions with the rack
	☐	Visually inspect all rollers for misalignment and excessive wear
	☐	Visually inspect both buffers for damages and excessive wear
Bridges	☐	Check that all guardrails and doors are in position and properly attached to the bridge
Power pack	☐	Check level of gas in gas tank
	☐	Make sure reserve lever is in the "off" position
	☐	Check level of hydraulic oil and condition of oil filter
Masts	☐	Looking from the ground up, make sure mast sections are well aligned and are not twisted
Wall ties	☐	Visually inspect wall ties and make sure they are not damaged or bent
Operation	☐	Make sure weather conditions and wind speed will not affect the operation of the motorized unit
	☐	Make sure that the motorized unit and plank outriggers clear all obstacles (balconies, etc.)

WEEKLY		
Daily	☐	Perform all steps included in the daily maintenance check list
Honda engines	☐	Perform recommended daily maintenance on 24 HP and 6.5 HP (emergency) engines, as per manufacturer's instructions
	☐	Perform recommended weekly maintenance on 24 HP and 6.5 HP (emergency) engines, as per manufacturer's instructions
Mobile chassis	☐	Make sure air pressure is adequate in all four tires
Main trolley	☐	Visually inspect all rollers for misalignment and excessive wear
	☐	Check all proximity limit switches and make sure they work properly (2 x TFL, 2 x TL, 1 x Link, 2 x BL, 2 x BFL and 4 door switches)
Motor trolley	☐	Check snap rings on all rollers and make sure shafts are tightly in place

WEEKLY		
Power pack	☐	Startup the Honda 6.5 HP emergency engine and make sure it works properly
	☐	Check for leaks and wear on hydraulic fittings, hoses, pumps and on engines
Masts	☐	Check every mast bolt and make sure it is tightened properly
	☐	Visually inspect all racks and make sure they are clear of debris
	☐	Make sure all racks are aligned properly and sufficiently lubricated; use Chevron Open Gear grease to lubricate, if necessary
	☐	Visually inspect all mast tubes for excessive wear or damages
Wall ties	☐	Visually inspect each bolt, anchor, wallmount and dual clamp and make sure they are properly fastened or tightened
Operation	☐	Bringing the motorized unit to the top of the setup, check for any unusual noises or vibrations

Maintenance

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

MONTHLY		
Daily	☐	Perform all steps included in the daily maintenance check list
Weekly	☐	Perform all steps included in the weekly maintenance check list
Honda engines	☐	Perform recommended daily maintenance on 24 HP and 6.5 HP (emergency) engines, as per manufacturer's instructions
	☐	Perform recommended weekly maintenance on 24 HP and 6.5 HP (emergency) engines, as per manufacturer's instructions
	☐	Perform recommended monthly maintenance on 24 HP and 6.5 HP (emergency) engines, as per manufacturer's instructions
Base pedestal and base pedestal extension	☐	Check solidity and stability of cribbing under base pedestal
	☐	Check stability of jacks on base pedestal extension
Mobile chassis	☐	Check all jacks and make sure the end outriggers are fully extended
	☐	Check stability of chassis
Main trolley	☐	Visually inspect all rollers for misalignment and excessive wear
	☐	Check bolts on top inside rollers and make sure shafts are tightly in place
	☐	Visually inspect the top final limit (TFL) proximity switch: red light indicates it is working properly
	☐	Visually inspect the top limit (TL) proximity switch: will turn red when putting a metal object in front of it

Maintenance

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

MONTHLY		
Motor trolley	☐	Visually inspect the pinions and make sure they are clear of debris
	☐	Visually inspect the alignment of pinions with the rack
	☐	Visually inspect all rollers for misalignment and excessive wear
	☐	Visually inspect both buffers for damages and excessive wear
Bridges	☐	Check that all guardrails and doors are in position and properly attached to the bridge
Power pack	☐	Check level of gas in gas tank
	☐	Make sure reserve lever is in the "off" position
	☐	Check level of hydraulic oil and condition of oil filter
Masts	☐	Looking from the ground up, make sure mast sections are well aligned and are not twisted
Wall ties	☐	Visually inspect wall ties and make sure they are not damaged or bent
Operation	☐	Make sure weather conditions and wind speed will not affect the operation of the motorized unit
	☐	Make sure that the motorized unit and plank outriggers clear all obstacles (balconies, etc.)

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 technician.

EVERY FOUR (4) MONTHS

Daily	☐	Perform all steps included in the daily maintenance check list
Weekly	☐	Perform all steps included in the weekly maintenance check list
Monthly	☐	Perform all steps included in the monthly maintenance check list
Honda engines	☐	Perform recommended daily maintenance on 24 HP and 6.5 HP (emergency) engines, as per manufacturer's instructions
	☐	Perform recommended weekly maintenance on 24 HP and 6.5 HP (emergency) engines, as per manufacturer's instructions
	☐	Perform recommended monthly maintenance on 24 HP and 6.5 HP (emergency) engines, as per manufacturer's instructions
	☐	Perform recommended maintenance scheduled for every four or six months on 24 HP and 6.5 HP (emergency) engines, as per manufacturer's instructions
Power pack	☐	Check both relief valves and make sure that they are set at 2200 psi
	☐	Change hydraulic oil filter
	☐	Check oil pressure on all hydraulic ports
Motor trolley	☐	Check the oil level in all gear motor boxes and refill if required; use VTO Gear oil SAE 80W/90
	☐	Visually inspect all rollers for misalignment and excessive wear
	☐	Make sure the idlers are in full contact with the back of the rack and are properly aligned with it; make sure no grease is leaking out of the bearings

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

YEARLY

Daily	☐	Perform all steps included in the daily maintenance check list
Weekly	☐	Perform all steps included in the weekly maintenance check list
Monthly	☐	Perform all steps included in the monthly maintenance check list
Four-month	☐	Perform all steps included in the 4-month maintenance check list
Honda engines	☐	Perform recommended daily maintenance on 24 HP and 6.5 HP (emergency) engines, as per manufacturer's instructions
	☐	Perform recommended weekly maintenance on 24 HP and 6.5 HP (emergency) engines, as per manufacturer's instructions
	☐	Perform recommended monthly maintenance on 24 HP and 6.5 HP (emergency) engines, as per manufacturer's instructions
	☐	Perform recommended maintenance scheduled for every four or six months on 24 HP and 6.5 HP (emergency) engines, as per manufacturer's instructions
	☐	Perform recommended yearly maintenance on 24 HP and 6.5 HP (emergency) engines, as per manufacturer's instructions
Base pedestal and base pedestal extension	☐	Check jacks and make sure they work properly
	☐	Check outriggers and make sure they extend to their full length and that all locking pins are in place
	☐	Visually inspect the structure for any welding defects, damaged parts and excessive rust or corrosion
Mobile chassis	☐	Visually inspect the structure for any welding defects, damaged parts and excessive rust or corrosion

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

YEARLY

Main trolley	☐	Visually inspect all rollers for misalignment and excessive wear
	☐	Clean the inside of the control box, especially the electrical contacts, using appropriate cleaning substances and an air hose
Motor trolley	☐	Check all gear boxes and make sure fixing and connection bolts on drive units are tightened properly
	☐	Change the oil on all gear boxes; check for leaking seals and replace if required
	☐	Replace buffers
	☐	Visually inspect all rollers for misalignment and excessive wear
	☐	Visually inspect all pinions for excessive wear
	☐	Adjust the alignment of pinions with the rack
	☐	Align and adjust gear-rack spacing
	☐	Visually inspect the structure for any welding defects, damaged parts and excessive rust or corrosion
	☐	Physically test all braking devices (four per machine)
Main frame	☐	Visually inspect the structure for any welding defects, damaged parts and excessive rust or corrosion
Intermediate frame	☐	Clean the inside of the pendulum box, especially the electrical contacts, using appropriate cleaning substances and an air hose
	☐	Visually inspect the structure for any welding defects, damaged parts and excessive rust or corrosion
	☐	Visually inspect all electrical cables and plugs for wear

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

YEARLY

Intermediate frame	☐	Clean the inside of the pendulum box, especially the electrical contacts, using appropriate cleaning substances and an air hose
	☐	Visually inspect the structure for any welding defects, damaged parts and excessive rust or corrosion
	☐	Visually inspect all electrical cables and plugs for wear
Bridges	☐	Visually inspect all regular and swivel bridges for welding effects, damaged parts and excessive rust or corrosion
Power pack	☐	Change the hydraulic oil; use Biodegradable hydraulic oil Shell Naturelle HF-MJ, code 407-214
	☐	Clean the inside of the motor box, especially the electrical contacts, using appropriate cleaning substances and an air hose
	☐	Visually inspect the structure for any welding defects, damaged parts and excessive rust or corrosion
Control panel	☐	Clean up the inside of the control panel, especially the electrical contacts, using appropriate cleaning substances and an air hose
	☐	Check all electrical cables and plugs for wear and make sure they are free of any imperfection; spray all connections with Dielectric
Masts	☐	Visually inspect the rack for excessive wear
	☐	Visually inspect the masts for any welding defects, damaged parts and excessive rust or corrosion
Wall ties	☐	Visually inspect wall ties for any welding defects, damaged parts and excessive rust or corrosion

Hydraulic Diagram