POWER TILT ACCESSORY

FUZE T50 | STELLAR GL | STELLAR LEAP | BENTLEY

OWNER'S OPERATION AND MAINTENANCE MANUAL

DEALER
This manual must be given to the user of the wheelchair

USER
Before using this wheelchair, read this entire manual and save for future reference

For more information regarding PDG products, parts & service, please visit www.pdgmobility.com

CE
Class 1 Medical Device

Description: Power Tilt Manual	Document: 16056	Rev: 2	Date: 2020 Feb 21

1. DEVICE DESCRIPTION

Thank you for purchasing a PDG mobility wheelchair Power Tilt Accessory.

Please do not install, maintain or operate this equipment without first reading and understanding this manual. Do not modify any parts on the unit in any way not specified by the manual. If you are unable to understand the warnings and instructions, contact a health care professional such as a doctor or therapist who is familiar with this type of product before attempting to use this equipment. Otherwise, injury or damage may result. Refer to this manual regularly for maximum safety and performance.

The Power Tilt is a wheelchair accessory that allows the attendant or user to tilt the wheelchair using a remote control switch. The accessory consists of an electric linear actuator, a battery assembly, a controller box,a tilt limiting assembly, and the switches used to control the system.

If you have any questions or comments about this manual, the safety and reliability of your wheelchair and the service you receive by us or your PDG supplier, please write or call us using the contact information below:

PDG PRODUCT DESIGN GROUP INC.
#103- 318 East Kent Avenue South, Vancouver, BC V5X 4N6
Ph: (604) 323-9220 Fax: (604) 323-9097
E-mail: info@pdgmobility.com

SAVE THIS MANUAL FOR FUTURE REFERENCE

2. TABLE OF CONTENTS

3. SPECIAL NOTES

WARNING/CAUTION — Notices as used in this manual apply to hazards or unsafe practices which could result in personal injury or property damage.

NOTE — THE INFORMATION CONTAINED IN THIS DOCUMENT IS SUBJECT TO CHANGE WITHOUT NOTICE. An updated version of this owner's manual may be available at www.PDGMobility.com

INDICATIONS FOR USE — This product is intended to provide the benefits of tilt-in-space to a wheelchair user, wherever an attendant to manually tilt the chair is not available, or the user is unable to self-tilt.

4. SAFETY SUMMARY

CAUTION: Keep clear of lower frame and underside of upper frame when operating tilt mechanism

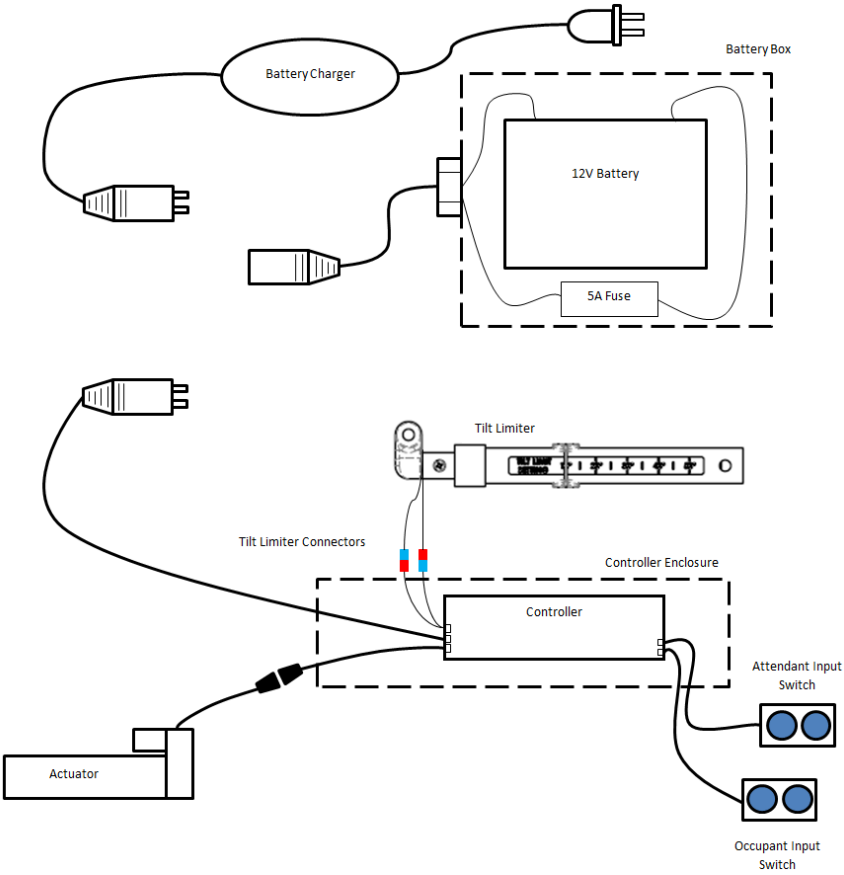
WARNING: Disconnect battery before adjusting or performing maintenance on wheelchair.

CAUTION: Do not open battery enclosure unless you are a competent technician

CAUTION: Do not step on battery enclosure

CAUTION: Do not immerse the battery in any liquid

5. POWER TILT SCHEMATIC



6. POWER TILT INSTALLATION

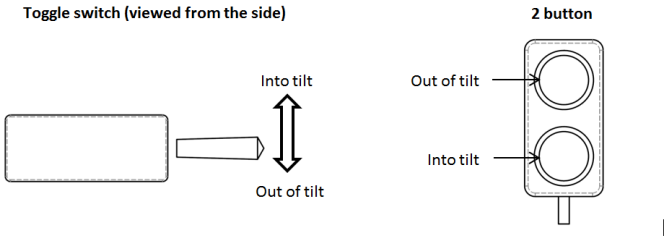
- See assembly drawings in the Appendix.
- Installation and service to the Power Tilt should be performed by a competent technician.

7. POWER TILT OPERATION

- **Do not** use the Power Tilt if it is behaving abnormally or erratically.
- **Do not** use the Power Tilt in wet conditions or immerse any of the components in liquid.
- **Do not** use the system with an occupant exceeding the maximum rated weight.
- **Inspect** the battery enclosure, connector, and cable before each use. Do not use the Power Tilt system if any of the components show wear or damage.
- **Disconnect** the power to the Power Tilt system prior to performing maintenance or adjustments on the wheelchair.
- **Caution** Keep clear of lower frame and underside of upper frame when operating tilt mechanism
- The Power Tilt system can be operated and adjusted by the wheelchair user or attendant.
- The Power Tilt operates an electric actuator to tilt the chair to any point up to the frame's tilt limit.
- The supplied actuator stops automatically at the maximum and minimum tilt. Maximum tilt can be further limited, see below.

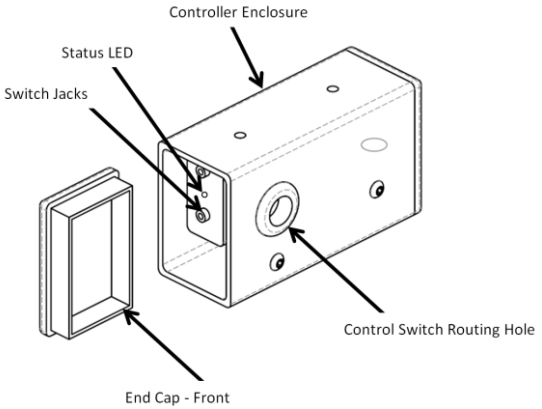
8. SWITCH OPERATION

- The Power Tilt is controlled by digital input to the controller from the supplied switches – a toggle switch, a 2-button switch or an egg switch. To tilt the chair, operate the switches as shown. The Power Tilt moves while the switch is held and stops when the switch is released.
- The egg switch operates in Toggle Mode, where the tilt direction reverses each time the switch is activated.



9. INSTALLING AND REMOVING CONTROL SWITCHES

- **Use only** PDG provided or PDG approved switches with the Power Tilt system.
- Up to two switches can be connected to the controller simultaneously.
- To install or remove a switch, pry off the end cap on the front of the controller enclosure to expose the switch jacks. Route the switch cable through the hole with a grommet in the side of the enclosure.
- **Do not** route the cable out the front of the enclosure.
- 3-position switches should be plugged directly into the controller. Mono switches (egg switch) must be used with a PDG-provided mono-to-stereo adapter cable (only supplied when required).

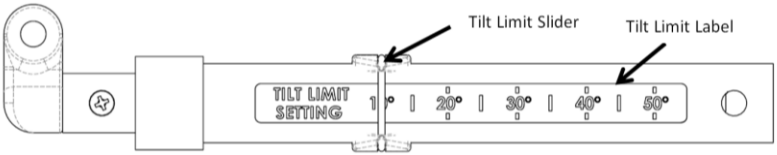


- Ensure the switch connector is fully seated into the jack. Replace the end cap. Please note the cap is designed to contact the switch connector.
- **Caution:** Partial insertion of the switch connector may result in an abnormal or a non-functioning system.

10. ADJUSTING TILT LIMIT

Note: Not available on Stellar LEAP or Bentley

- The Power Tilt system has an adjustable tilt limit setting and a tilt limit indicator scale.

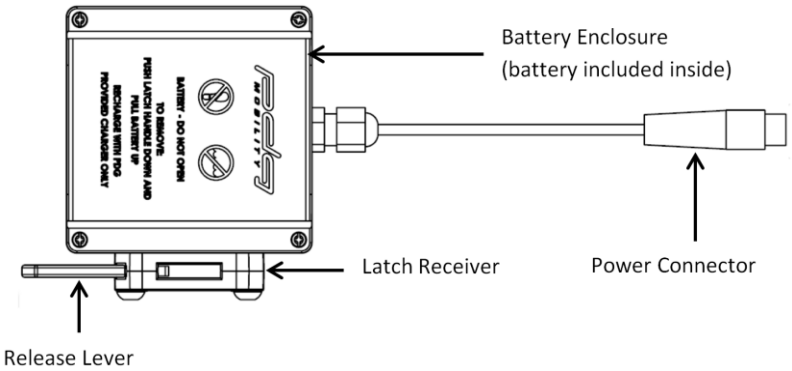


Tilt Limit Slider and Indicator (Stellar GL & Fuze T50)

- To adjust tilt limit, move the tilt limit slider to the desired degree of tilt, shown by the label.
    - Note: the tilt limit is adjusted relative to the lower frame, not relative to the ground.
    - Note: regardless of tilt limit position the power tilt will return to a level seat unless there is a system fault.

11. USING AND CHARGING THE BATTERY

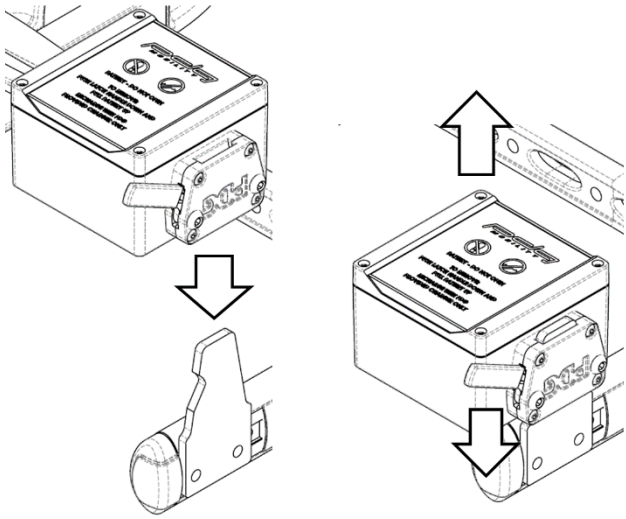
- **Do not** use the Power Tilt with depleted batteries.
- **Do not** leave the batteries in a discharged state if not using the unit for some time. The batteries should be checked monthly and recharged as needed.
- **Protect** the battery from sources of ignition, such as flames and sparks.
- **Do not** charge the battery in direct sunlight.
- **Use only** PDG provided battery assemblies, and battery chargers with the Power Tilt system.
- **Unplug** the battery from the controller when not in use.
- **Do not** pull or yank on the battery cord to disconnect the cable. Do not carry the battery by the cord.
- **Do not** step on the battery.

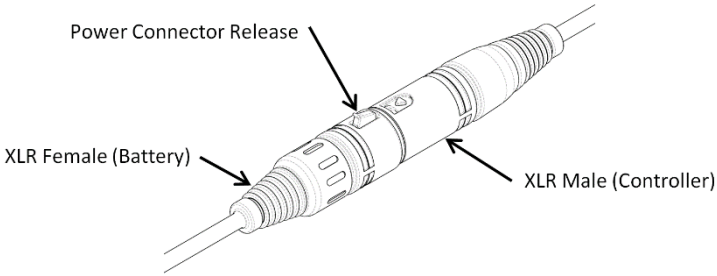


- The Power Tilt is equipped with two modular lead-acid batteries intended to be alternated on and off the chair.
- Keep one battery on the chair and one on the battery charger, to ensure that a fully charged battery is always available.
- The Power Tilt controller consumes a small amount of power when plugged into the battery, even when the chair is not being used. If the chair is going to remain unused for several days, please unplug the power tilt to avoid draining the battery.
- Don't wait to change batteries until the battery runs down to zero and the Power Tilt stops working. To prolong battery life, change out the Power Tilt batteries at regular intervals, preferably daily.

12. INSTALLING AND REMOVING THE BATTERY

- To connect the battery module to the Power Tilt system, drop the latch receiver onto the mounting plate, located at the rear of the wheelchair, and plug in the cord.
- To disconnect the battery, first unplug the power connector, then simultaneously depress the release lever and pull the battery module directly upwards. Immediately plug the battery into the charger in order to prolong battery life.





13. BATTERY CHARGER

- **Read** the below instructions and the provided battery charger manufacturer's manual before using the battery charger.
- This battery charger is an off-board charger intended for the PDG 12V lead-acid battery only. The charging connector interfaces with the Power Tilt battery – see below schematic.
- To charge the battery, plug the power supply plug into a 120V wall socket and then plug the 3 pin XLR connector into the battery connector cable.
- Do not carry the battery charger on the wheelchair.
- Occasional use of the battery prior to the charging complete indication is acceptable if the need is urgent.

14. BATTERY CHARGER WIRING SCHEMATIC

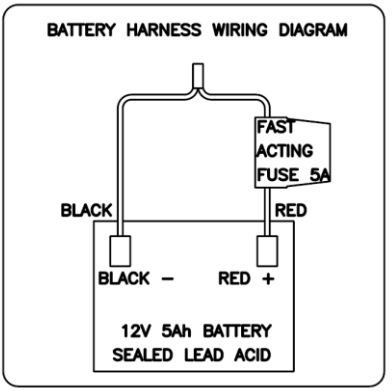
15. TROUBLESHOOTING

Problem	Possible Cause	Solution
Actuator whines but does not move	Low battery charge	Charge or swap out battery with a freshly charged battery.
	Actuator failed	Replace actuator.
	Frame movement obstructed	Ensure nothing is obstructing the movement of the upper frame.
Controller “clicks” and status LED turns on but actuator does not move, no whining sound heard from actuator	Actuator power cable unplugged	Plug in actuator power cable.
	Actuator cable damaged or actuator failed	Replace actuator.
Operate control switch, no sounds heard, actuator does not move	Control switch unplugged	Plug in control switch.
	Power cord unplugged	Plug in power cord.
	Tilt limit switch incorrectly adjusted	Adjust tilt limit switch.
	Battery dead	Charge or swap out battery with a fully charged battery.
	Tilt limit switch failed	See “Disabling the Tilt Limit Switch”.
	Control switch failed	See “Checking The Control Switches”.
	Controller failed	Replace controller
No LEDs lit on battery charger when charger is connected to the wall	Charger is not properly connected to the power outlet	Check all connections and cables.
	No power is being delivered to the wall outlet	Plug in another appliance to verify the power is working.
	Charger plugged into 240V power	Use 120V power only.
	Charger failed	Replace charger.

Green LED lit on battery charger when battery is initially connected, other LEDs not lighting up and then green LED starts blinking continuously	Charger fuse removed or blown	Open charger 5A fuse compartment and check that the fuse is not discolored. If the fuse is discolored, replace the charger.
	Battery fuse removed or blown, or battery failed.	Try charging the other battery, if the other battery charges then service the faulty battery.
	Battery not properly connected inside battery compartment	See “Servicing the Battery”.
Battery runs out before 1 day of use	Battery is not being fully charged before use	Charge battery until the #5 LED on the charger is lit.
	Battery has failed	Replace battery, see “Battery Service”.
Chair goes into tilt by itself	Control switch unplugged	Ensure control switch plug is fully seated and that the control switch cable is correctly routed.

16. SERVICING THE BATTERY

- **Do not** open the battery enclosure or service the battery without the manufacturer's written approval.
- **Always** wear eye protection when working with batteries. Lead acid batteries may explode.
- **Never** touch the contacts of the battery or short the contacts together. Shorting the contacts may cause the battery to overheat and explode.
- **Properly** dispose of used lead-acid batteries.
- **Do not** use third-party batteries with the Power Tilt system.
- Lead acid batteries have a finite service life and degrade over time. The life of the battery depends on the frequency of use, how deeply they are discharged, and the length of time spent in a discharged state before the batteries are recharged.
- To install a new lead-acid battery into the battery module:
    1. Disconnect the battery from the controller and remove the battery from the chair.
    2. Remove the 4 Phillips screws on the outside of the battery enclosure.
    3. Lift off the lid and pull the battery and wiring harness out of the enclosure.
    4. Disconnect the wiring harness from the battery terminals.
    5. Connect the new battery to the wiring harness (note polarity, see below schematic).
    6. Check the fuse before replacing the lid. To check the fuse, open the fuse compartment inside the battery enclosure and check that the fuse is present and not discolored or blackened. If the fuse is discolored, the fuse has failed and needs to be replaced.



17. DISABLING THE TILT LIMIT SWITCH

WARNING: Disconnect battery before adjusting or performing maintenance on wheelchair.

1. Identify the wires connecting the tilt limiter to the controller
2. If necessary, Gently Pull the wires for the tilt limiter clear of the controller enclosure.
3. Disconnect the quick-disconnect connections on the wires. Some force may be required. Hold the connectors, and not the wires. Pulling on the wires will likely result in damage to the wiring harness.
4. Remove the tilt limiter assembly from the wheelchair.
5. Reconnect the male and female connectors that are attached to the controller

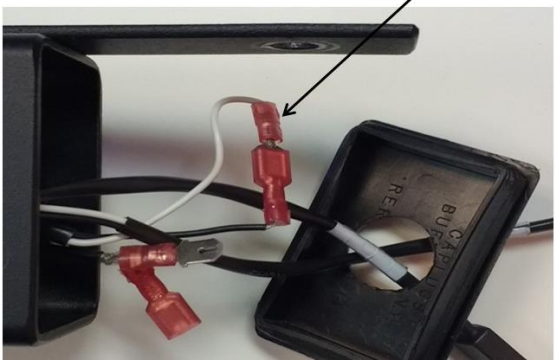
The system will now travel through the full tilt range

Quick-disconnect connectors –

Tilt limit sensor active

Quick-disconnect connectors –

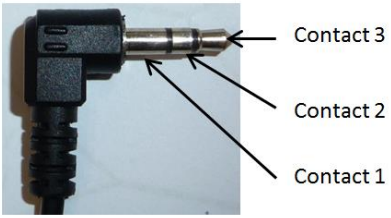
Tilt limit sensor disabled

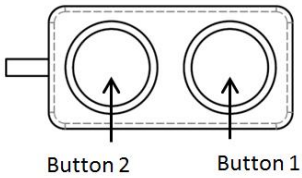


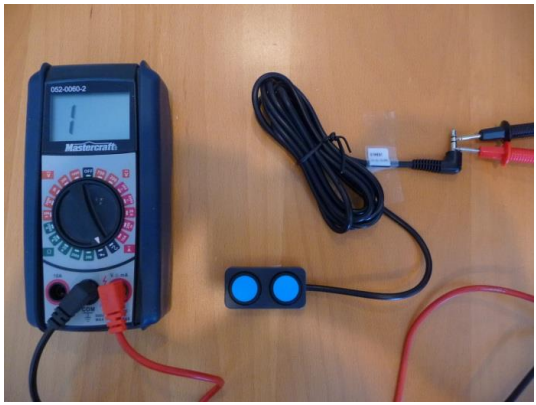
18. CHECKING THE CONTROL SWITCHES – 3 POSITION SWITCH

CAUTION: Keep clear of lower frame and underside of upper frame when operating tilt mechanism

Verify that the switch is working correctly by using a digital multimeter to measure continuity between the three contacts on the switch plug. Contact 1 is closest to the cable end, and Button 1 is farthest from the cable end. See images below for reference.







1. Without depressing any of the buttons, check for continuity between all of the 3 contacts of the mini-plug connector (1-2, 1-3, and 2-3). If there is continuity then the switch has failed.
2. Depress Button 1 and check for continuity between (1-3). If there is no continuity then the switch has failed.
3. Depress Button 2 and check for continuity between (1-2). If there is no continuity then the switch has failed.

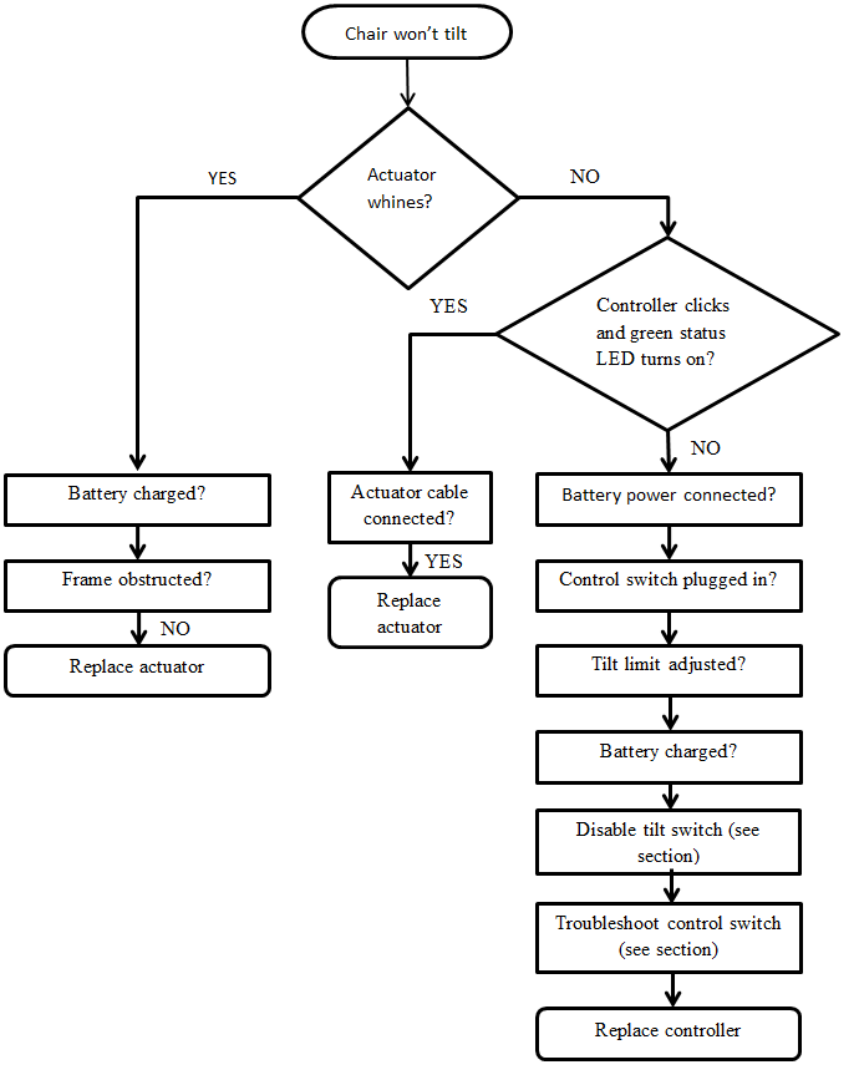
19. CHECKING THE CONTROL SWITCHES – MONO (EGG SWITCH)

1. Check for continuity between the two switch contacts with the switch not pushed. If there is continuity, then the switch has failed.
2. Check for continuity between the two switch contacts with the switch pushed. If there is no continuity, then the switch has failed.

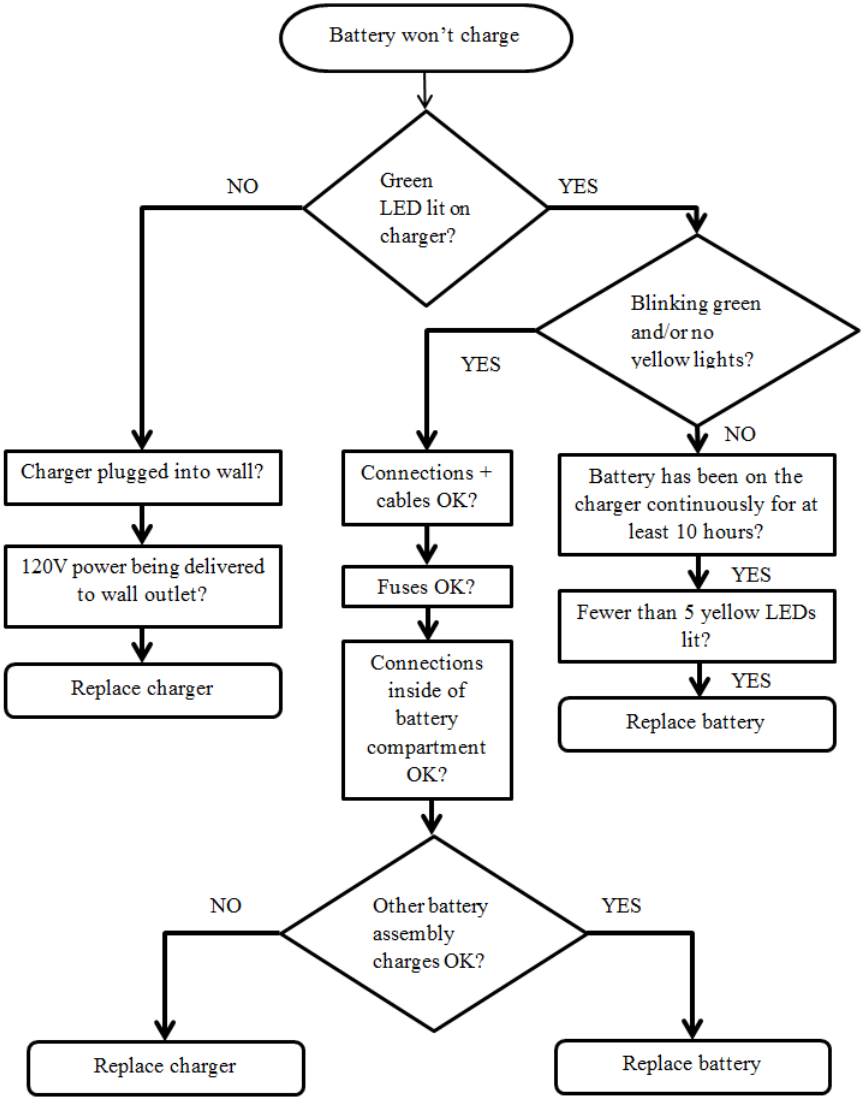
Mono switch contacts

20. TROUBLESHOOTING FLOWCHART – POWER TILT SYSTEM

WARNING: Disconnect battery before adjusting or performing maintenance on wheelchair.



21. TROUBLESHOOTING FLOWCHART –BATTERY



22. WARRANTY INFORMATION

PLEASE NOTE – THE WARRANTY BELOW HAS BEEN DRAFTED TO COMPLY WITH FEDERAL LAW APPLICABLE TO PRODUCTS MANUFACTURED AFTER JULY 4th, 1975.

This warranty is extended only to the original purchaser/user of our products.

This warranty gives you specific legal rights and you may also have other legal rights, which vary from state to state.

PDG warrants its product, except for the seat cushion (which is not warranted), to be free from defects in materials and workmanship for a period of one (1) year from date of purchase. The side frames and cross members are warranted for the lifetime of the original purchaser/user. If within such warranty period any such product shall be proven to be defective, such product shall be repaired or replaced, at PDG's option.

This Warranty does not include any labor or shipping charges incurred in replacement part installation or repair of any such product. PDG's sole obligation and your exclusive remedy under this warranty shall be limited to such repair and/or replacement.

For warranty service, please contact the dealer from whom you purchased your PDG product. In the event you do not receive satisfactory warranty service, please write directly to PDG at the address on the back cover page, provide dealer's name, address, and date of purchase, indicate nature of the defect and, if the product is serialized, indicate the serial number. Do not return products to our factory without our prior consent. Limitations and exclusions: the foregoing warranty shall not apply to serial numbered products if the serial number has been removed or defaced, products subjected to negligence, accident, improper operation, maintenance or storage, products modified without PDG's express written consent including, but not limited to, modification through the use of unauthorized parts or attachments; products damaged by reason of repairs made to any component without the specific consent of PDG, or to a product damaged by circumstances beyond PDG's control, and such evaluation will be solely determined by PDG . The warranty shall not apply to problems arising from normal wear or failure to adhere to these instructions. The foregoing express warranty is exclusive and in lieu of any other warranties whatsoever, whether express or implied, including the implied warranties of merchantability and fitness for a particular purpose, and the sole remedy for violations of any warranty whatsoever, shall be limited to repair or replacement of the defective product pursuant to the terms contained herein . The application of any implied warranty whatsoever shall not extend beyond the duration of the express warranty provided herein. The manufacturer shall not be liable for any consequential or incidental damages whatsoever. This warranty shall be extended to comply with state/provincial laws and requirements.

23. TECHNICAL SPECIFICATIONS

Maximum rated occupant weight (Stellar GL, Stellar LEAP, and Fuze T50, Bentley)	250 lbs
Maximum rated occupant weight (Fuze T50 with 350 lbs Power Tilt upgrade)	350 lbs
Battery operation temperature range	-40° C to 60° C
Battery charging temperature range	-20° C to 50° C
Battery fuse and battery charger fuse	5A fast-acting blade type fuses
Battery voltage and capacity	12V 5.0 Ah
Battery cyclic endurance (IEC 60254-1)	200 charge/discharge cycles
Battery charging time	6 hours to 80%, 10 hours to 100% of capacity

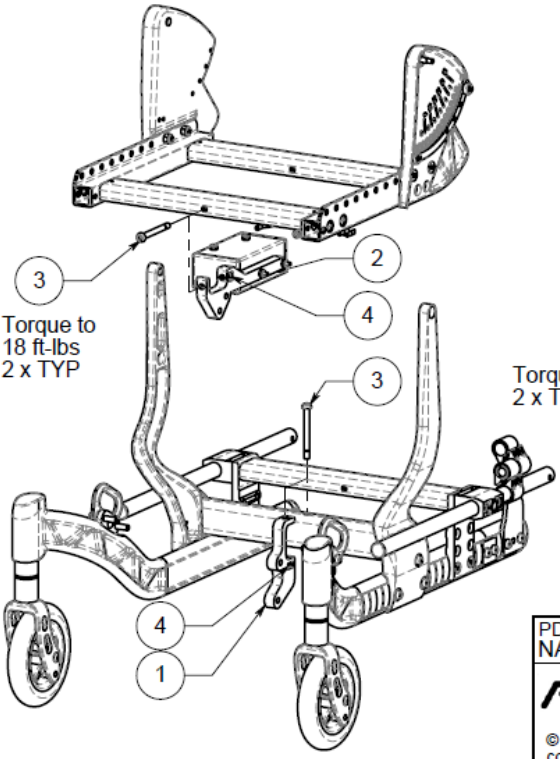
24. APPENDIX

1	2	3

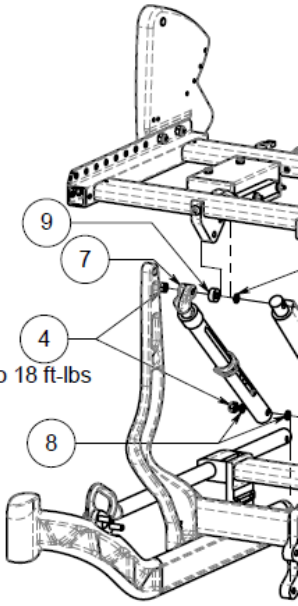
Rev	Revision description
0	Initial Release

Item	Part Name or Description	Number	250 QTY
1	F2 - Power Tilt - Lower Frame Actuator Mount	68954	1
2	Power Tilt - Controller Enclosure - Asm	68468	1
3	5/16-18(3A) x 3" with Shank CBHCS - Black Magni 575	12899	4
4	5/16-18 (2B) Nylon Locknut - Thick - Black Zinc	12010	4
5	Power Tilt Actuator - LD20 - 200mm Stroke	36276	-
6	Power Tilt Actuator - LD3 - 200mm Stroke	12093	1
7	Power Tilt - Tilt Limit - Assembly	36279	1
8	5/16" ID x 1/2" OD x 1/16" Black Nylon Spacer	12512	6
9	5/16" ID x 3/4" OD x 5/16" L black nylon spacer	12012	1

Actuator Mounting Block Assembly



Actuator and Til



PDG part number	Author
NA	Jim Formby

Title: F2 - T50 - Powe

Third angle projectio

Dimensioning and Tolerancing Standard ASME Y14.5-2009

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lbs QTY	350 lbs QTY
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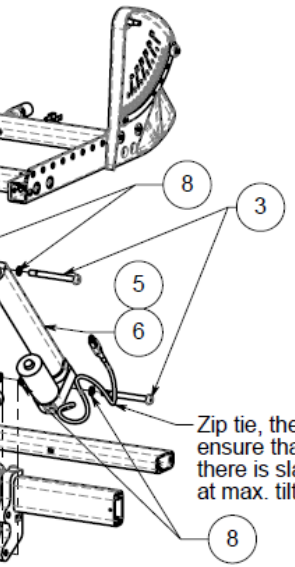
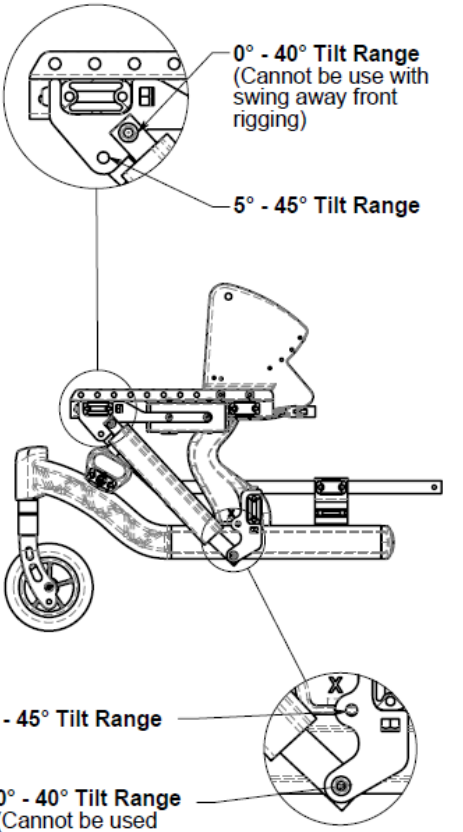
	1
4	4
4	4
	1
	-
	1
6	6
	1

lt Limiter Assembly



Actuator Position Setup

Upper and lower frame set-up position must match



	Technical reference	Revised by	Approved by
	Torr Brown	Jim Formby	Torr Brown

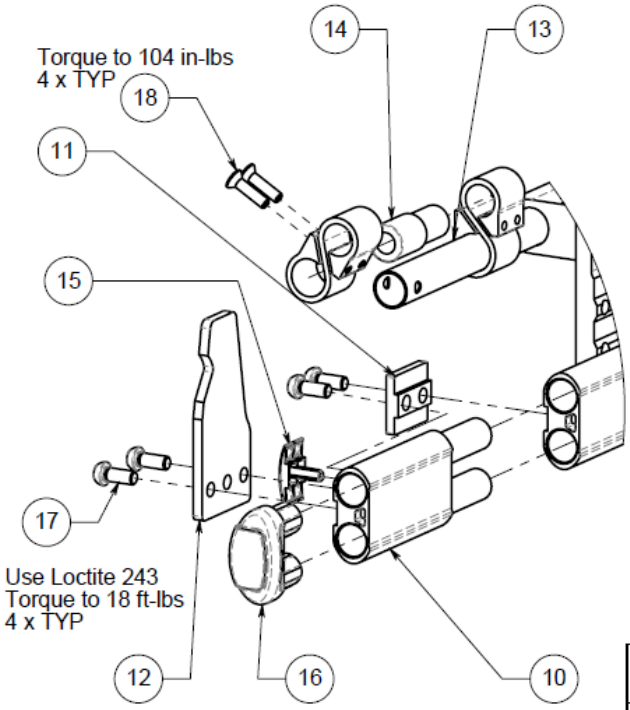
wer Tilt - Assembly			File name (Drawing #) 68950		Status NA
Tolerances unless otherwise stated: Angular: +/- 1° Other x +/-0.8, x.x+/-0.4, x.xx+/-0.15		Units mm	Sheet 1 of 2	Date of Issue 2020 Feb 05	Revision 0

1	2	3

Rev	Revision description
0	Initial Release

Battery Mount Assembly
(Left hand side of chair shown)

See power tilt manual (document 16056) for complete wiring schematic of the Power Tilt Accessory



Fuze T50 Power

Item	Part Name or Des
1	F2 - Power Tilt - L
2	Power Tilt - Contr
3	5/16-18(3A) x 3" v
4	5/16-18 (2B) Nylo
5	Power Tilt Actuato
6	Power Tilt Actuato
7	Power Tilt - Tilt Li
8	5/16" ID x 1/2" OD
9	5/16" ID x 3/4" OD
10	Fuze - Lower Fran
11	Fuze - Lower Fran
12	Power Tilt - Recei
13	Fuze - Wheel Loc
14	Wheel Lock Clam
15	Fuze - Lower Fran
16	Fuze Lower Fram
17	5/16-18(3A) x 3/4
18	1/4-20 x 1" flat he

Other Parts: Batte

Item	Part Name or Descri
19	Power Tilt - Battery A
20	Power Tilt - Manual
21	Power Tilt - Charger
22	Power Tilt -X-Conne
23	Power Tilt - Toggle S
24	Power Tilt - 2 Button
25	Power Tilt - Egg Swit

PDG part number	Author
NA	Jim Formb

Title: F2 - T50 - Pow

Third angle project

Dimensioning and Tolerancing Standard ASME Y14.5-2009

4	5	6
		ECO#
		1758

r Tilt BOM

scription	Number	250 lbs QTY	350 lbs QTY
Lower Frame Actuator Mount	68954	1	1
roller Enclosure - Asm	68468	1	1
with Shank CBHCS - Black Magni 575	12899	4	4
on Locknut - Thick - Black Zinc	12010	4	4
tor - LD20 - 200mm Stroke	36276	-	1
tor - LD3 - 200mm Stroke	12093	1	-
imit - Assembly	36279	1	1
D x 1/16" Black Nylon Spacer	12512	6	6
D x 5/16" L black nylon spacer	12012	1	1
me Extension - Asm	68741	1	1
me Extension - Bridge	68353	1	1
iver Plate	68469	1	1
ck Clamp	68451	2	2
np Offset Spacer	36114	1	1
me - Masking Cap	68206	1	1
ne - Rear Cap	68732	1	1
4" CBHCS - Black Magni 575	12898	4	4
ead cap screw - black zinc	12121	4	4

ery, charger, connector and switch components

ription	Number	Toggle Switch QTY	Button Switch QTY	Egg Switch QTY
Assembly	36248	2	2	2
	16056	1	1	1
0.75A; 6 & 12 Volt	36693	1	1	1
ect XLR Connector	36694	1	1	1
Switch	36695	1	-	-
Switch	36696	-	1	-
itch	36697	-	-	1

by	Technical reference Torr Brown	Revised by Jim Formby	Approved by Torr Brown

wer Tilt - Assembly	File name (Drawing #) 68950	Status NA

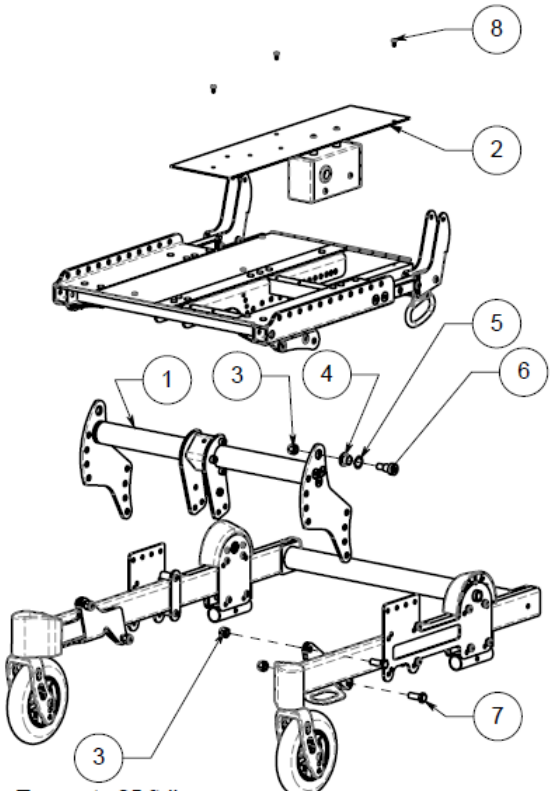
tion	Tolerances unless otherwise stated: Angular: +/- 1° Other x +/-0.8, x.x+/-0.4, x.xx+/-0.15	Units mm	Sheet 2 of 2	Date of Issue 2020 Feb 05	Revision 0

A B C D

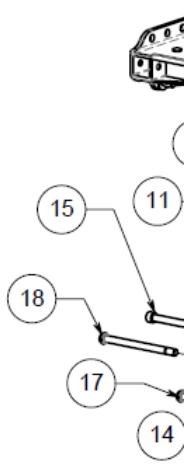
1	2	3

Rev	Revision description
4	Changed battery mounting and updated BOM

Sub Frame and Controller Assembly



Torque to 25 ft-lbs
6 x TYP



Actu

1. Secondary Gas Strut Mo
- Both Sides
Install 1st

2. Actuator Mount - Center
Install 2nd

2. Tilt Limit Mount - Right S
Install 3rd

PDG part number	Author
NA	Torr Brown
	Title: Stellar GL - P

Third angle projec

Dimensioning and Tolerancing Standard ASME Y14.5-2009

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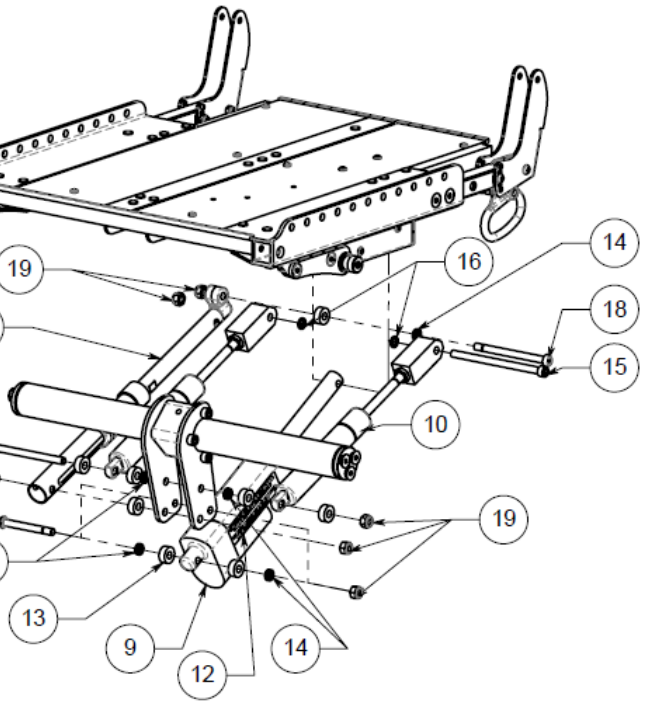
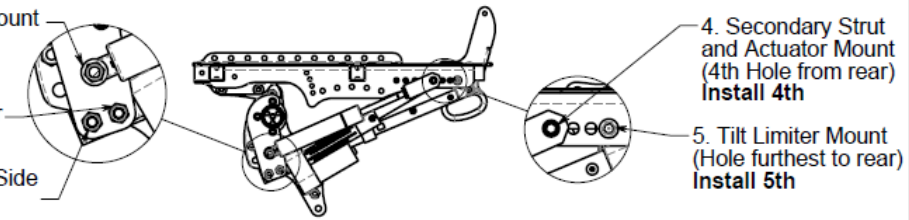
		ECO#
		1730

Actuator, Secondary Strut and Tilt Limit Assembly



uator, Secondary Strut and Tilt Limit Setup



yn	Technical reference Torr Brown	Revised by Jim Formby	Approved by Torr Brown

Power Tilt - UF-SF-LF Assembly			File name (Drawing #) 55661		Status NA
ction	Tolerances unless otherwise stated: Angular: +/- 1° Other x +/-0.8, x.x+/-0.4, x.xx+/-0.15	Units mm	Sheet 1 of 2	Date of Issue 2019 Jul 22	Revision 4

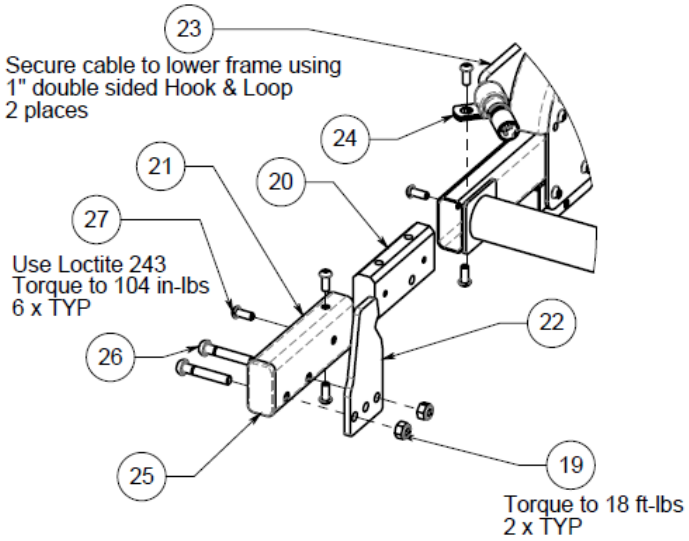
A B C D

1	2	3

Rev	Revision description
4	Changed battery mounting and updated BOM

Battery Mount Assembly
(Left hand side of chair shown)

See power tilt manual (document 16056) for complete wiring schematic of the Power Tilt Accessory



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Item
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Other Parts: Battery, charger, connector and switch components

Item	Part Name or Description	Number	Toggle Switch QTY	Bu
28	Power Tilt - Battery Assembly	36248	2	
29	Power Tilt - Manual	16056	1	
30	Power Tilt - Charger 0.75A; 6 & 12 Volt	36693	1	
31	Power Tilt -X-Connect XLR Connector	36694	1	
32	Power Tilt - Toggle Switch	36695	1	
33	Power Tilt - 2 Button Switch	36696	-	
34	Power Tilt - Egg Switch	36697	-	

PDG part number	Author
NA	Torr Brown

Title: Stellar GL - Po

Third angle project

Dimensioning and Tolerancing Standard ASME Y14.5-2009

4	5	6
		ECO#
		1730

tellar GL Power Tilt BOM

	Part Name or Description	Number	QTY
	Stellar GL - Power Tilt - SF Assembly	55662	1
	Stellar GL - Power Tilt - Controller Assembly	55664	1
	3/8-16 Nylon Locknut - Thick - Black Zinc	12021	6
	Oil Lite Bushing - Flanged - 1/2" ID x 5/8" OD x 1/2" L	12398	2
	Spring - Wave Disc - 0.650" ID x 0.855" OD x 0.060" Height	12480	2
	1/2" x 1/2" x 3/8-16 Socket Head Shoulder Bolt - Black Zinc	12241	2
	3/8-16 x 1" Hex Head Bolt	12408	4
	# 8 x 3/8" self-tapping phillips pan head screw	12067	3
	Power Tilt Actuator - LD20 - 100mm Stroke	36273	1
	G2 Secondary Gas Strut Assembly	55666	2
	Power Tilt - Tilt Limit - Assembly	36279	1
	Stellar Power Tilt - Operation Caution and Warning Label	16053	1
	5/16" ID x 3/4" OD x 5/16" L black nylon spacer	12012	8
	5/16" ID x 1/2" OD x 1/8" Black Nylon Spacer	12227	5
	5/16-18 x 5" Socket Head Cap Screw	12611	2
	5/16" ID x 1/2" OD x 1/16" Black Nylon Spacer	12512	2
	5/16-18(3A) x 2-3/4" with Shank CBHCS - Black Magni 575	12899	1
	5/16-18 (2B) Nylon Locknut - Thick - Black Zinc	12010	7
	5/16-18(3A) x 4" with Shank CBHCS - Black Magni 575	12899	2
	Accessory Extension Connector for Lower Frame	55218	1
	G2 - Power Tilt - Frame Extension for Battery Mount	55674	1
	Power Tilt - Receiver Plate	68469	1
	Stellar Power Tilt - Extension Cable - Assembly	36113	1
	Loop Clamp ¾" ID x 2" LG	36690	1
	Lower Frame Tube Cap	55159	1
	5/16-18(3A) x 1-3/4" CBHCS - Black Magni 575	12898	2
	1/4-20 x 5/8" Socket Button Head - Black Zinc	12135	6

utton Switch QTY	Egg Switch QTY
2	2
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1	-
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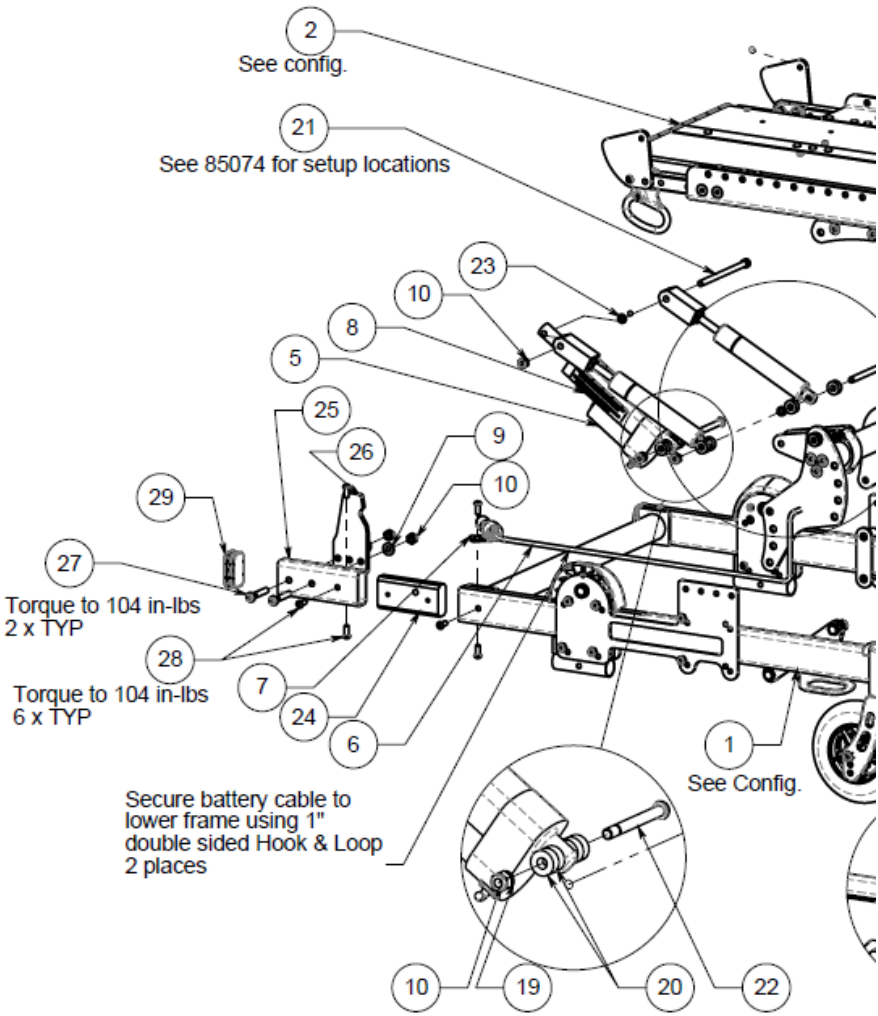
	Technical reference	Revised by	Approved by
n	Torr Brown	Jim Formby	Torr Brown

ower Tilt - UF-SF-LF Assembly		File name (Drawing #) 55661		Status NA
tion	Tolerances unless otherwise stated: Angular: +/- 1° Other x +/-0.8, x.x+/-0.4, x.xx+/-0.15	Units mm	Sheet 2 of 2	Date of Issue 2019 Jul 22	Revision 4

A B C D

Rev	Revision description
3	Changed battery mounting, updated BOM



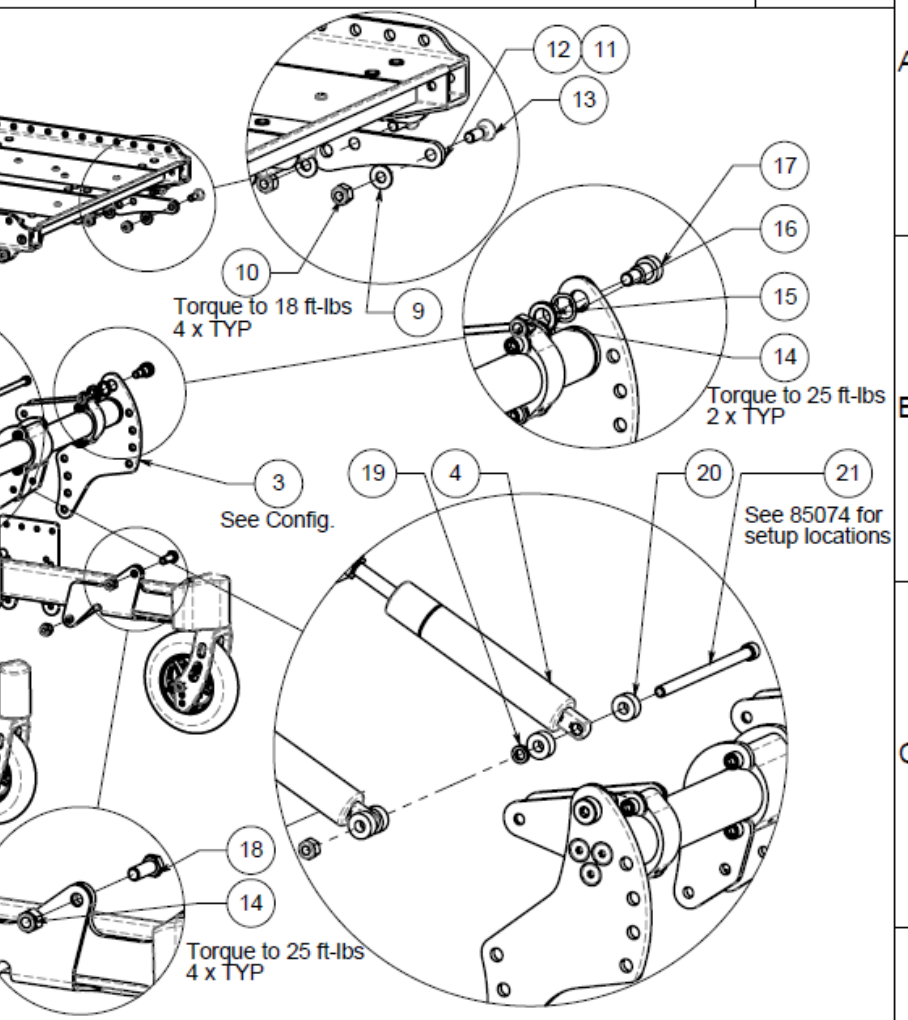
PDG part number NA	Author Torr Brown
	Title: Stellar LEAP -

Third angle projecti

Dimensioning and Tolerancing Standard ASME Y14.5-2009

4	5	6

	ECO#
	1730

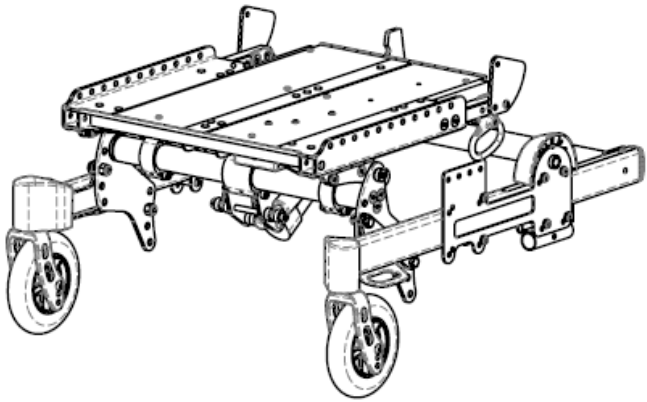


A B C D

	Technical reference	Revised by	Approved by	
n	Torr Brown	Jim Formby	Torr Brown	
- Power Tilt - UF-SF-LF Assembly			File name (Drawing #) 55651	Status NA
tion	Tolerances unless otherwise stated: Angular: +/- 1° Other x +/-0.8, x.x+/-0.4, x.xx+/-0.15	Units mm	Sheet 1 of 2	Date of Issue 2019 Jul 22	Revision 3

1	2	3

Rev	Revision description
3	Changed battery mounting, updated BOM



Dimensioning and Tolerancing Standard ASME Y14.5-2009

PDG part number	Author
NA	Torr Brown

Title:
Stellar LEAP -

Third angle project

4	5	6	
		ECO#	
		1730	
Item	Part Name or Description	Number	QTY
1	G2 - Lower Frame Assembly	55760	1
2	Stellar LEAP - Power Tilt - Upper Frame Assembly	55655	1
3	Stellar LEAP - Power Tilt - SF Assembly	55652	1
4	G2 Secondary Gas Strut Assembly	55666	2
5	Power Tilt Actuator - LD20 - 100mm Stroke	36273	1
6	Stellar Power Tilt - Extension Cable - Assembly	36113	1
7	Loop Clamp ¾" ID x 2" LG	36690	1
8	Stellar Power Tilt - Operation Caution and Warning Label	16053	1
9	5/16" ID x 11/16" OD x 1/16" Washer - Black Zinc	12013	6
10	5/16-18 (2B) Nylon Locknut - Thick - Black Zinc	12010	9
11	G2 - Stellar GL - Upper Frame - Pivot Plate (RH/LH)	55734	1
12	G2 - Stellar GL - Upper Frame - Pivot Plate (RH/LH)	55734	1
13	5/16-18(3A) x 1" x 0.4" Shank FHCS - Black Magni 575	12897	4
14	3/8-16 Nylon Locknut - Thick - Black Zinc	12021	6
15	Oil Lite Bushing - Flanged - 1/2" ID x 5/8" OD x 1/2" L	12398	2
16	Spring - Wave Disc - 0.650" ID x 0.855" OD x 0.060" Height	12480	2
17	1/2" x 1/2" x 3/8-16 Socket Head Shoulder Bolt - Black Zinc	12241	2
18	3/8-16 x 1" Hex Head Bolt	12408	4
19	5/16" ID x 1/2" OD x I/8" Black Nylon Spacer	12227	3
20	5/16" ID x 3/4" OD x 5/16" L black nylon spacer	12012	8
21	5/16-18 x 5" Socket Head Cap Screw	12611	2
22	5/16-18(3A) x 3" with Shank CBHCS - Black Magni 575	12899	1
23	1/4"ID x 1/2"OD x 0.06T Nylon Washer	12226	2
24	Accessory Extension Connector for Lower Frame	55218	1
25	G2 - Power Tilt - Frame Extension for Battery Mount	55674	1
26	Power Tilt - Receiver Plate	68469	1
27	5/16-18(3A) x 1-3/4" CBHCS - Black Magni 575	12898	2
28	1/4-20 x 5/8" Socket Button Head - Black Zinc	12135	6
29	Lower Frame Tube Cap	55159	1
30	Power Tilt - Battery Assembly	36248	1
31	Power Tilt - Charger 0.75A; 6 & 12 Volt	36693	1
32	Power Tilt - X-Connect XLR Connector	36694	1
33	Power Tilt Manual	16056	1

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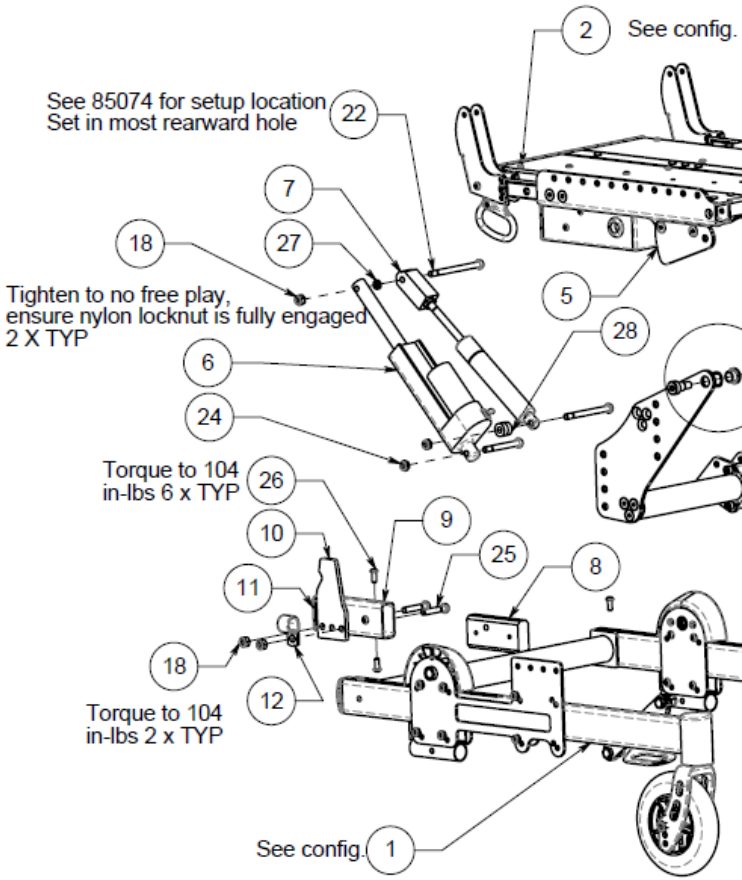
n	Technical reference Torr Brown	Revised by Jim Formby	Approved by Torr Brown		
- Power Tilt - UF-SF-LF Assembly			File name (Drawing #) 55651		Status NA
tion	Tolerances unless otherwise stated: Angular: +/- 1° Other x +/-0.8, x.x+/-0.4, x.xx+/-0.15	Units mm	Sheet 2 of 2	Date of Issue 2019 Jul 22	Revision 3

Rev	Revision description
0	Initial Release



Notes:
1. Material: As per detailed part
2. Remove burrs & sharp edges.
3. Finish : As per detailed part
4. Component weight [grams]: 23741.79

Dimensioning and Tolerancing Standard ASME Y14.5-2009

PDG part number	Author
NA	Andrew Ch
	Title: Bentley - Powe

Third angle projecti

4	5	6

ECO#
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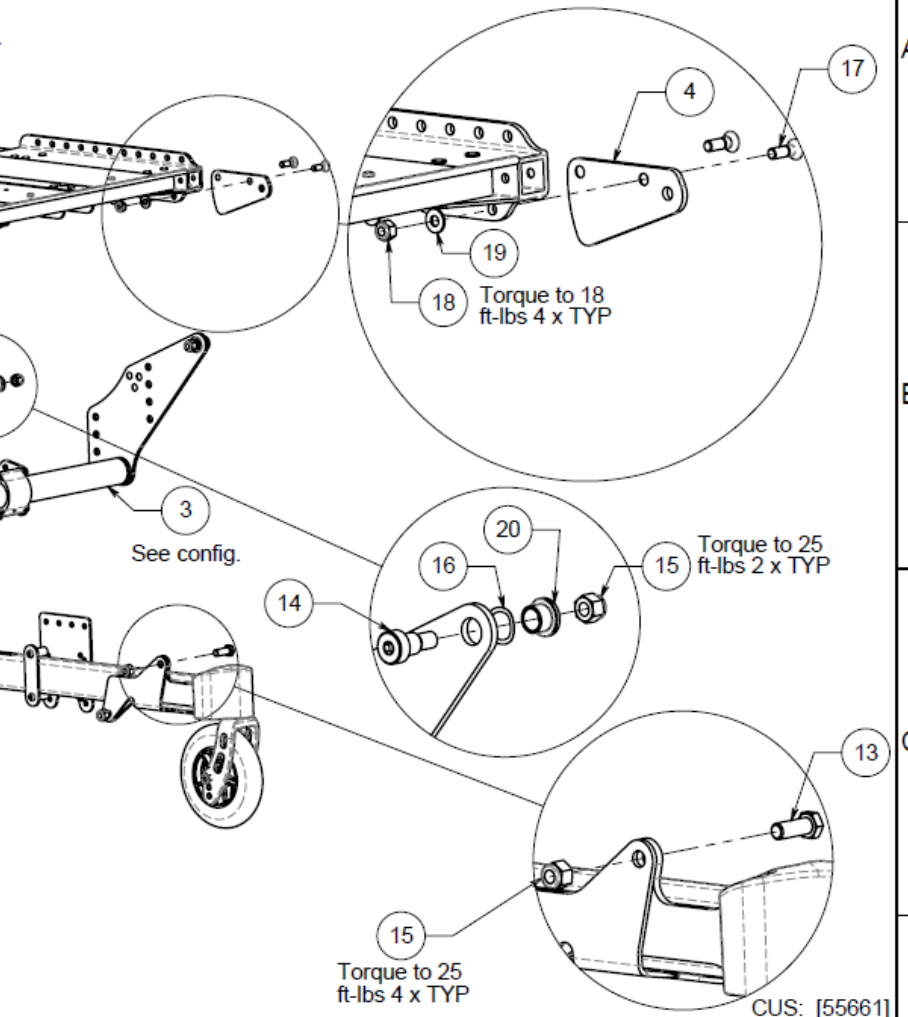


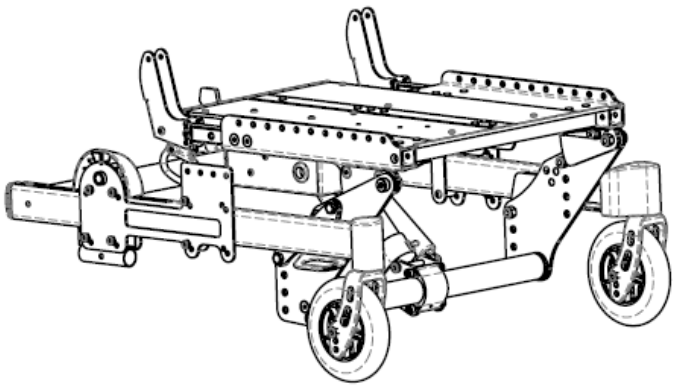
	Technical reference	Revised by	Approved by
hang	Andrew Chang	Jim Formby	Torr Brown

	File name (Drawing #)	Status
er Tilt - UF-SF-LF - Asm	55685	NA

tion	Tolerances unless otherwise stated:	Units	Sheet	Date of Issue	Revision
	Angular: +/- 1º Other: x +/-0.8, x.x+/-0.4, x.xx+/-0.15	mm	1 of 2	2020 Jan 10	0

1	2	3

Rev	Revision description
0	Initial Release



Notes:
1. Material: As per detailed part
2. Remove burrs & sharp edges.
3. Finish : As per detailed part
4. Component weight [grams]: 23741.79

Dimensioning and Tolerancing Standard ASME Y14.5-2009

PDG part number	Author
NA	Andrew Ch

Title: Bentley - Powe

Third angle projecti

4	5	6

	ECO#
	1751

Item	Part Name or Description	Number	QTY	
1	G2 - Lower Frame Assembly	55760	1	A
2	Stellar GL - Power Tilt - Upper Frame Assembly	55668	1	
3	G2 Bentley - Power Tilt - Sub Frame - Asm	55686	1	
4	G2.1 - Bentley & GL - Upper Frame - Pivot Plate (LH/RH)	55916	1	
5	G2.1 - Bentley & GL - Upper Frame - Pivot Plate (RH/LH)	55916	1	
6	Power Tilt Actuator - LD20 - 100mm Stroke	36273	1	
7	G2 Secondary Gas Strut Assembly	55666	1	
8	Accessory Extension Connector for Lower Frame	55218	1	B
9	G2 - Power Tilt - Frame Extension for Battery Mount	55674	1	
10	Power Tilt - Receiver Plate	68469	1	
11	Lower Frame Tube Cap	55159	1	
12	Loop Clamp ¾" ID x 2" LG	36690	1	
13	3/8-16 x 1" Hex Head Bolt	12408	4	
14	1/2" x 1/2" x 3/8-16 Socket Head Shoulder Bolt - Black Zinc	12241	2	
15	3/8-16 Nylon Locknut - Thick - Black Zinc	12021	6	
16	Spring - Wave Disc - 0.650" ID x 0.855" OD x 0.060" Height	12480	2	
17	5/16-18(3A) x 1" x 0.4" Shank FHCS - Black Magni 575	12897	4	
18	5/16-18 (2B) Nylon Locknut - Thick - Black Zinc	12010	7	
19	5/16" ID x 11/16" OD x 1/16" Washer - Black Zinc	12013	4	
20	Oil Lite Bushing - Flanged - 1/2" ID x 5/8" OD x 1/2" L	12398	2	
21	5/16-18(3A) x 2-3/4" with Shank CBHCS - Black Magni 575	12899	1	
22	5/16-18(3A) x 4" with Shank CBHCS - Black Magni 575	12899	1	C
23	5/16-18(3A) x 3-1/2" with Shank CBHCS - Black Magni 575	12899	1	
24	5/16-18 Nylon Locknut - Thin - Black Zinc	12066	2	
25	5/16-18(3A) x 1-3/4" CBHCS - Black Magni 575	12898	2	
26	1/4-20 x 5/8" Socket Button Head - Black Zinc	12135	7	
27	5/16" ID x 1/2" OD x 1/8" Black Nylon Spacer	12227	1	
28	5/16" ID x 3/4" OD x 5/16" L black nylon spacer	12012	2	
29	Power Tilt - Battery Assembly	36248	1	
30	Power Tilt - Charger 0.75A; 6 & 12 Volt	36693	1	
31	Power Tilt - X-Connect XLR Connector	36694	1	

	Technical reference	Revised by	Approved by
hang	Andrew Chang	Jim Formby	Torr Brown

					D
er Tilt - UF-SF-LF - Asm		File name (Drawing #) 55685		Status NA	
on	Tolerances unless otherwise stated: Angular: +/- 1º Other: x +/-0.8, x.x+/-0.4, x.xx+/-0.15	Units mm	Sheet 2 of 2	Date of Issue 2020 Jan 10	Revision 0

25. NOTES:

NOTES:

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