DSL 505 Rear Delt / Pec Fly Cable Repair

Applies to

DSL 505 Rear Delt / Pec Fly built prior to 5/16/2017

Issue/Symptoms

On some machines using the 1/8” diameter lift cables, the cam cables may twist and jam not allowing the arms to properly lift and lower the weight stack.

Resolution

On machines using the 1/8” lift cables that exhibit this issue, replace the existing 1/8” cables with larger 3/16” diameter cables.

Tools required

- Torque wrench with minimum 150 ft-lb torque fitted to 5/32-inch & 3/8-inch hex key bit sockets.
- #2 Phillips and Flat Blade screw drivers
- Socket wrench with 3/4-inch socket
- Adjustable wrench 0-1.5”
- 3/4-inch open-end wrench
- 5/32 inch and 3/8 inch hex key wrenches

Parts required

ID	QTY	Part Number	Description
1	1	PPP00000CW38299101	CW38299-101 ASSY,CABLE,STK-SROD,119.88,DSRDPF(1)
2	1	PPP000CWCLNN172000	CWCLNN172-000 ASSY, CABLE, UPPER, PEC FLY/REAR DELT(1)

Note: 1) only replace cables on machines exhibiting this issue.

Procedure

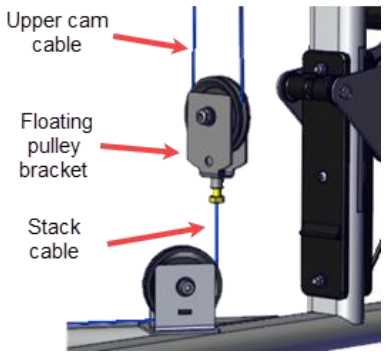
Review entire procedure before starting.

***Important*:** Take note of the upper cam and stack cable routing before beginning the removal procedure (recommend taking pictures before cable removal).

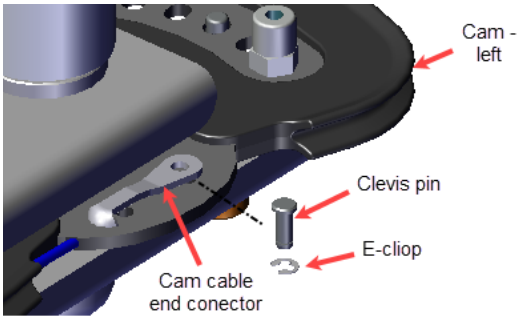
Removal Procedure

1. Remove the stack shroud covers, see steps 1 thru 5 in the *Shroud Assembly Guide* (PN CW39990-101).
2. Remove all pulley covers using a #2 Phillips screw driver. Retain pulley covers and fasteners for installation.

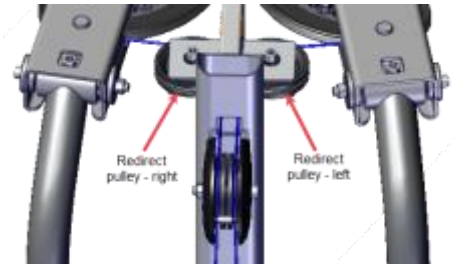
   Upper Cam Cable Removal
3. Disconnect the stack cable from the floating pulley bracket by removing the stack Cable bolt using an adjustable wrench and 3/4” wrench. Retain fasteners for installation.



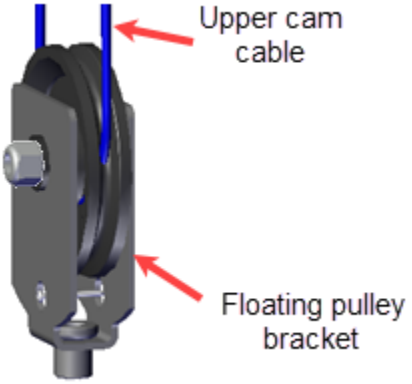
4. Disconnect the Cam cable from the left and right cams by removing the E- clip and Clevis Pins using a flat blade screw driver. Retain fasteners for installation.



5. Remove the cable from the left and right cam redirect pulleys (pulley removal is not required).



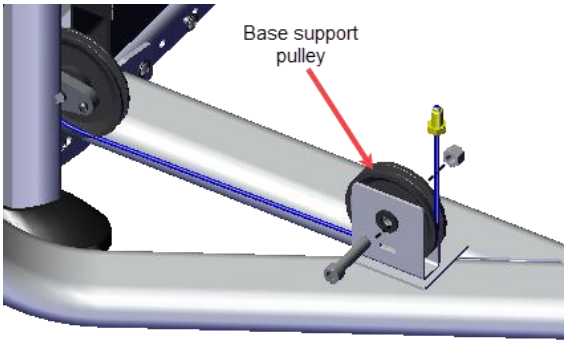
6. Remove the upper cam cable from the floating pulley bracket (pulley removal is not required).



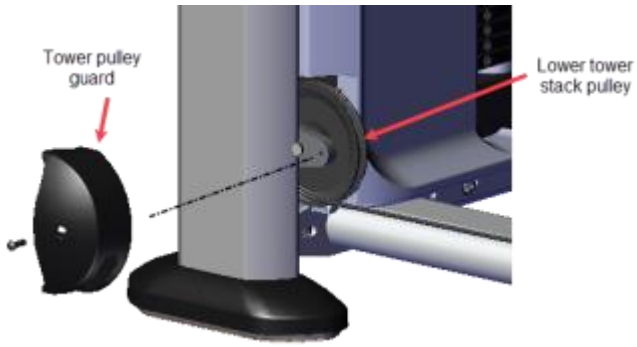
7. Remove the upper cam cable from the unit and discard.

Stack Cable Removal

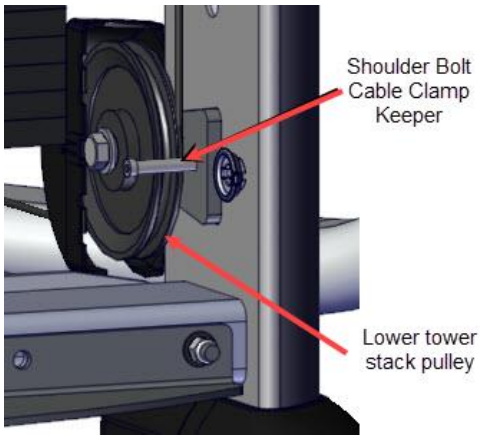
8. Remove the base support pulley using a 3/8” hex key and 3/4” wrench and remove cable from the bracket. Retain fasteners for installation.



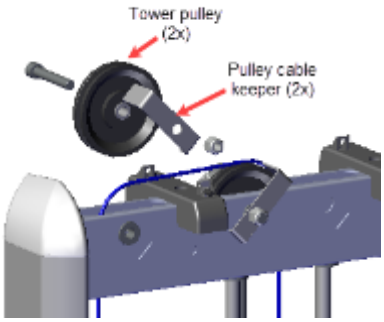
9. Remove the tower pulley guard cover using a 5/32” hex key. Retain tower guard and fastener for installation.



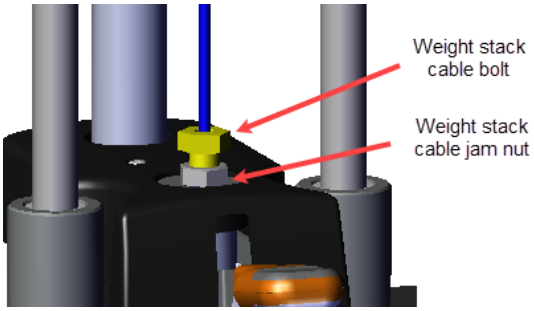
10. Remove the 5/16” shoulder bolt cable keeper from the lower tower stack pulley using a 5/23” hex key. Retain hardware for installation.



11. Remove the two upper tower pulleys and cable keepers using a 3/8” hex key and 3/4” wrench. Retain pulleys and fasteners for installation.



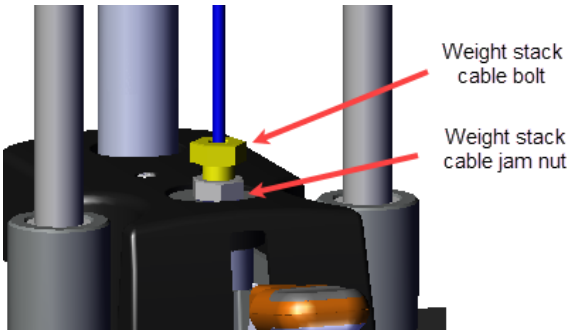
12. Loosen the weight stack cable jam nut using the 3/4” wrench and unscrew the cable bolt. Remove and discard the stack cable from the unit.



Installation Procedure

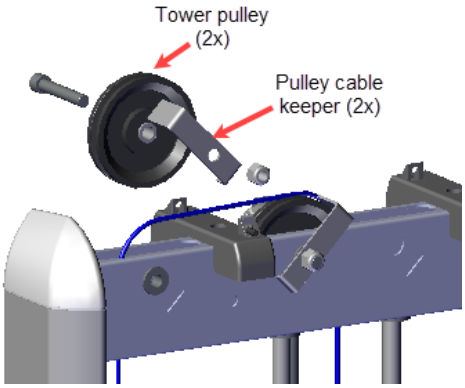
Stack Cable Installation Procedure

13. Attach the new stack cable (1) to the top of the weight stack. Thread the new stack cable bolt into the weight stack a minimum of six full turns (6 threads minimum) and lightly finger tighten the jam nut.

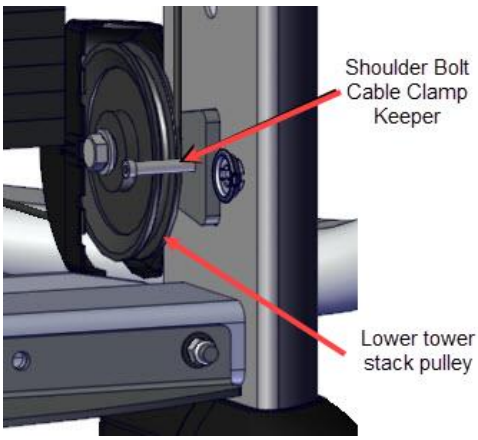


14. Thread the cable up through the weight tower frame. Replace the pulleys and cable retainers making sure that the cable is seated properly in the pulleys and under the cable retaining keepers. Tighten the pulley bolts using a 3/8” hex key and 3/4” wrench and tighten to 124 ft-lb (168 N-m) of torque.

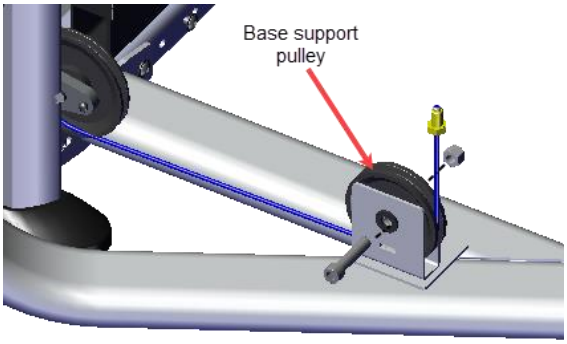
Note: When properly installed, the cable keeper brackets keep the cable securely seated in the pulley. However, the keepers must not contact the cable while the unit is in use.



15. Route the cable down the left side of the stack and place around the lower stack pulley. Install the 5/16” shoulder bolt cable keeper using a 5/23” hex key and tighten to 8 ft-lb (11 N-m) of torque.

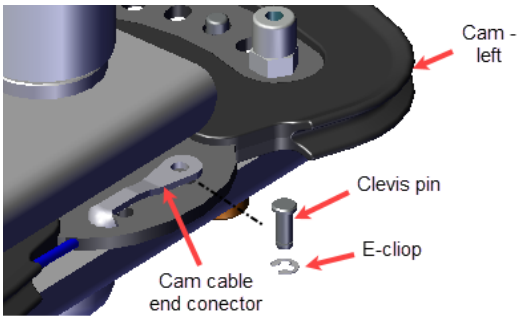


16. Next route the cable thru the base pulley support bracket. Install the base support pulley using the removed hex bolt and nut using a 3/8" hex key and 3/4" wrench, tighten to 124 ft-lb (168 N-m) of torque.

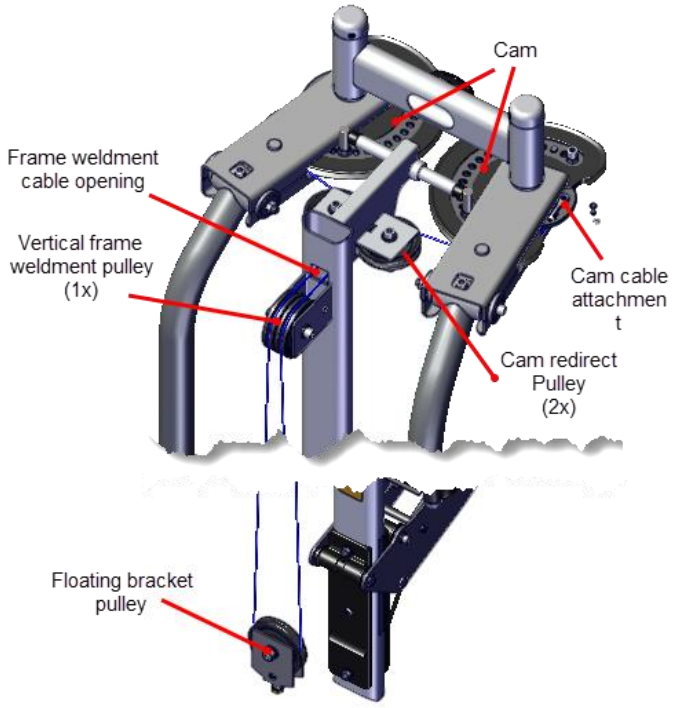


Upper Cam Cable Installation Procedure

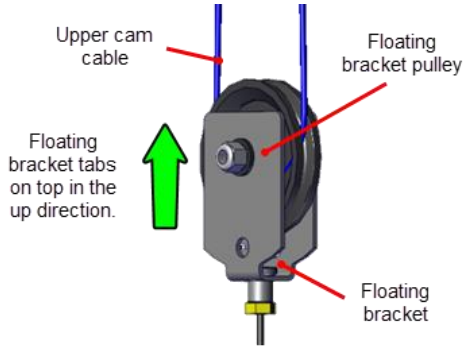
17. Attach one end to the upper cam cable (2) to the cam using the E-clip and clevis pin.



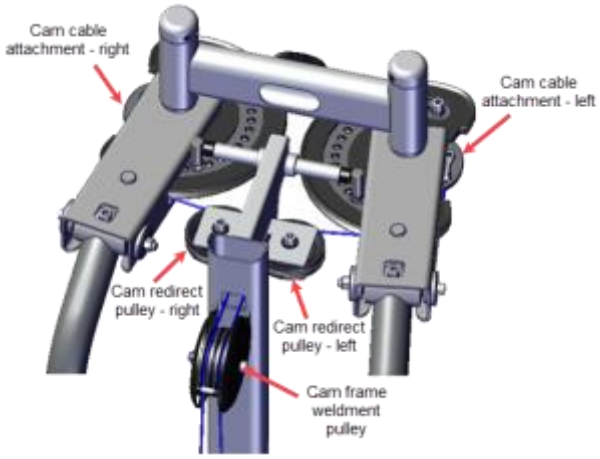
18. Route the cable around the cam pulley, around the redirect pulley, thru the frame weldment cable opening, around the vertical frame weldment pulley, and down to the floating bracket pulley.



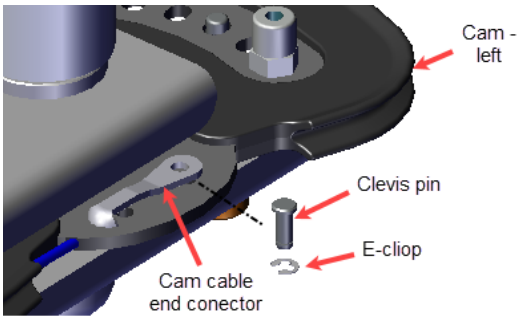
19. Hold the floating bracket with the tabs pointing up and carefully thread the cable under the pulley and up to the cam frame weldment pulley.



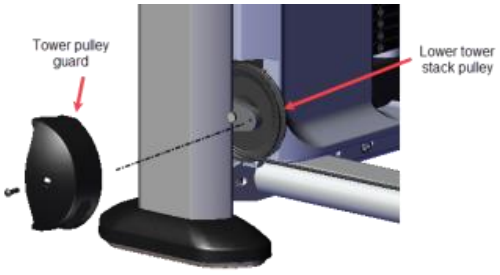
20. Continue routing the cable from the floating bracket pulley over the cam frame weldment pulley, thru the frame weldment cable opening, around the redirect pulley, and around the opposite cam to the cable attachment.



21. Attach the cam cable to the cam using the E-clip and Clivis Pin fastener.



22. Make sure that the cables to the floating bracket are straight and not twisted and that cable around the floating pulley is properly seated.
23. Reinstall the tower pulley guard cover using a 5/32” hex key.



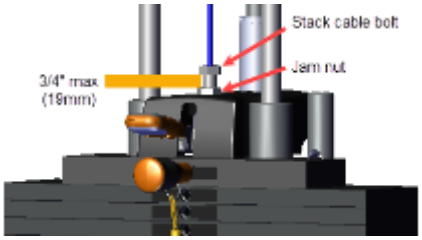
24. Reinstall all removed pulley covers using a #2 Phillips screw driver.

Adjust the cable tension

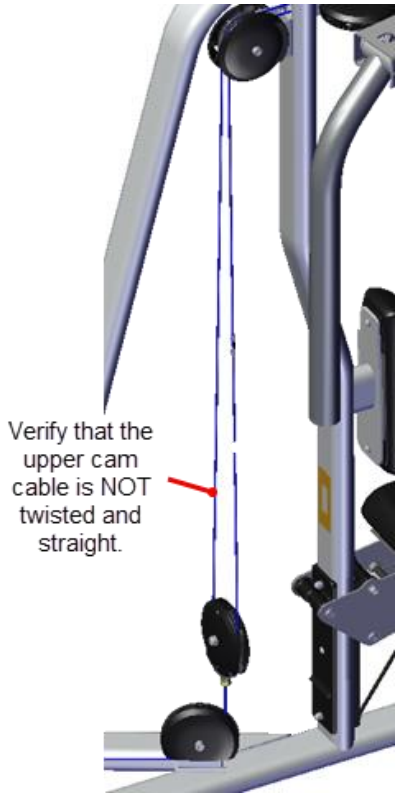
25. Loosen the jam nut and adjust the stack cable bolt until the cable meets the following requirements:
    - The top weight begins to separate from the second weight plate.
    - The selector pin can easily be inserted into each of the weight plates.
    - The add-on weight is selected when the latch is in the down position.
    - At least six threads on the cable bolt extend into the selector stem.
26. Tighten the locking jam nut against the selector stem to 50 ft-lb (81 N-m) of torque.
27. Lift the top weight to relieve any cable twist and check the adjustment by inserting the weight pin into every weight plate hole. The weight pin should slide easily in and out of each weight plate.

Note: The cable should be tight and the add-on weight should be selected when the lever is in the down position.

28. Check cable pulleys, end connections, and end fittings. Make sure all connections are tight, adjusting cable tension as necessary.
29. The distance from the underside of the stack cable bolt head to the top of the jam nut should be no more than 3/4-inch (19 mm).



30. Remove cable weight tension by lifting and pining the first weight plate above the second weight plate. With no cable tension, verify that the floating bracket upper cam cable is not twisted and the cable is straight.



Compete Installation

31. Reinstall the stack shroud covers, see the *Shroud Assembly Guide* (PN CW39990-101).
32. Verify that the upper cam cable is correctly seated in the floating bracket pulley and that the cable is not twisted and is hanging straight. Verify the equipment operation and return to service.