

Document #: TSB 21Sep17\_AAR\_speed\_sensor\_replacement

| Bulletin Date:   | 21.September.2017                                |            |            |
|------------------|--|------------|------------|
| Models Affected: | Assault AirRunner                                | Posted by: | Jeff Meeks |
| Description:     | Procedure to replace the speed (i.e. RPM) sensor |            |            |

#### **Tools Required:**

- #2 Phillips head screwdriver or electric screwdriver / drill with #2 Phillips head bit
- 16 mm wrench, socket wrench, or adjustable wrench
- Wire cutters

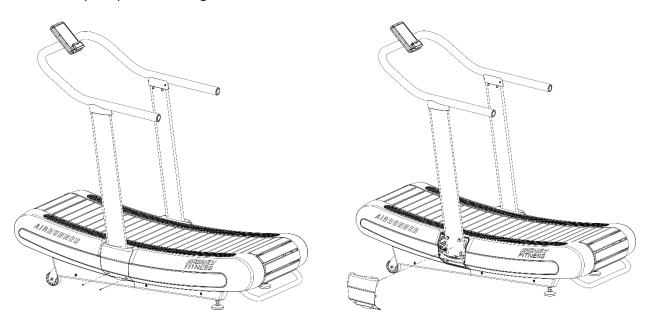
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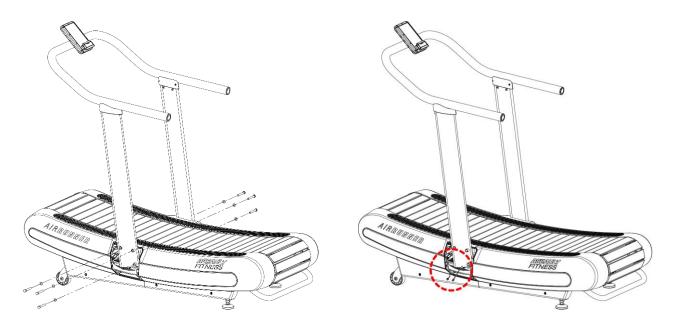


#### **Service Process:**

1. Remove the center shroud cover's retaining screws followed by the center shroud covers. Left side shown. Repeat process on right side.



2. Remove the handrail base bolts and washers from the base of both the left and right upright tubes using the 16 mm wrench. Next, unplug the cable found coming out of the base of the left upright tube.

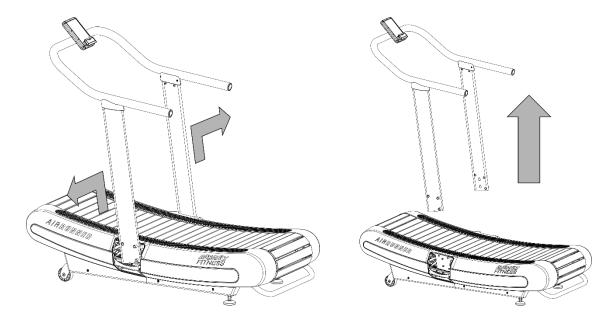




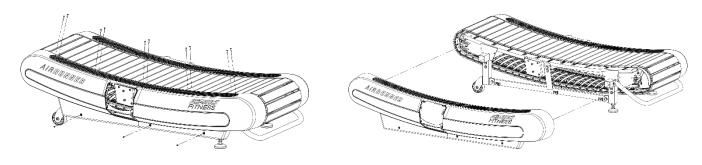


3. After the six handrail base bolts have been removed <u>and the cable disconnected</u>, you can lift off the handrail assembly by lifting up on the handrail assembly and then pushing outwards on the bottom of each upright tube to clear the heads of the locating screws. This will free the uprights from the base so that the handrail assembly can be completely removed from the treadmill base.

Note: We recommend using two (2) people to lift the handrail assembly.



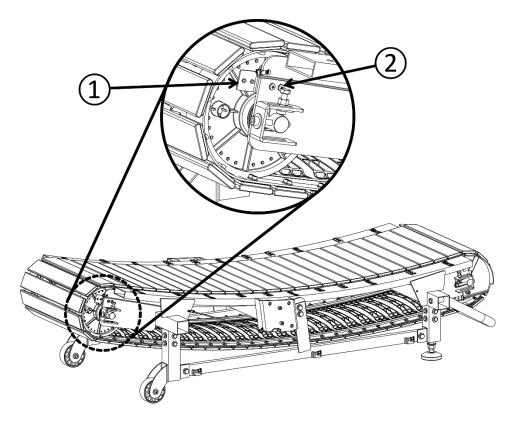
4. The main shrouds can now be removed. To remove each shroud, the 10 top screws and 3 lower screws shown below must be removed. Once all 13 screws have been removed then the shrouds can be slid off of the frame. Left side shown. Repeat for right side.



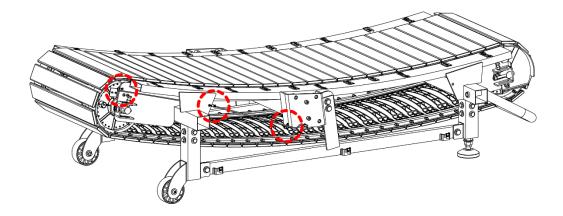


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5. With the shrouds removed you can access the speed (i.e. RPM) sensor. The sensor is located near the left side of the front rear roller and has a cable which runs along the left side of the frame to the left upright mounting bracket. The location of the sensor (1) is shown below. It is held in place with two Phillips screws (2).



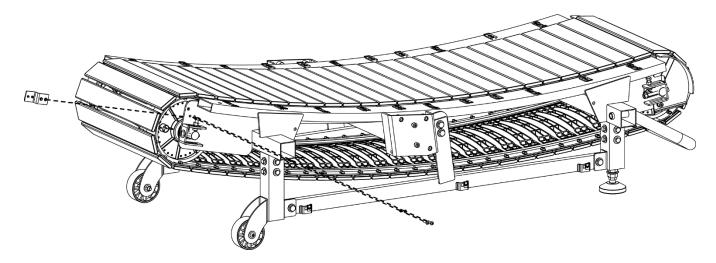
6. To remove the old sensor you need to first cut the zip ties holding the cable harness in place using wire cutters or other similar cutting tool. The zip ties to remove are located in the three (3) locations illustrated below.



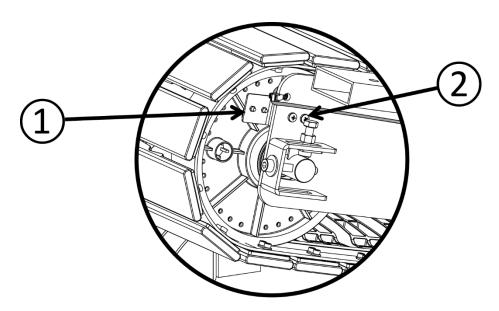


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7. The old sensor can now be removed with the Phillips screwdriver as shown below. **Note the wire is not shown but will be attached to the sensor.** 



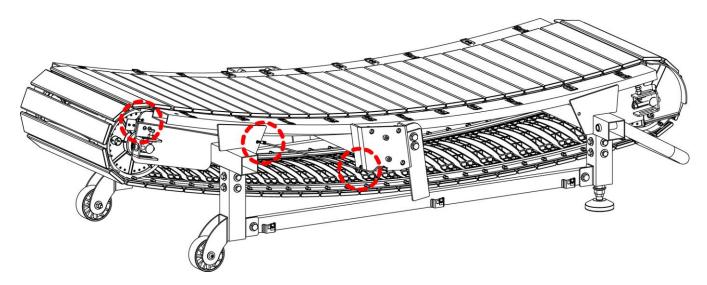
8. The new sensor (1) can be installed in place of the old sensor with the new screws and washers (2) as shown below.

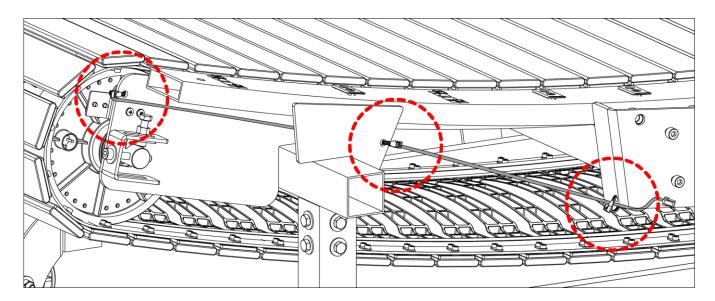




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9. With the new sensor in place, attach the sensor cable harness to the frame using the supplied zip ties. Attach the zip ties to the frame in the locations shown below. Note that the path of the cable through the frame shall be in such a manner as to avoid the belt, rollers, and pulleys (i.e. moving parts).



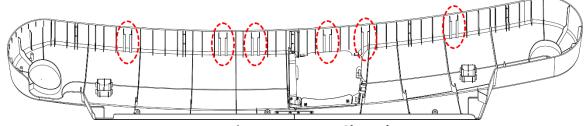


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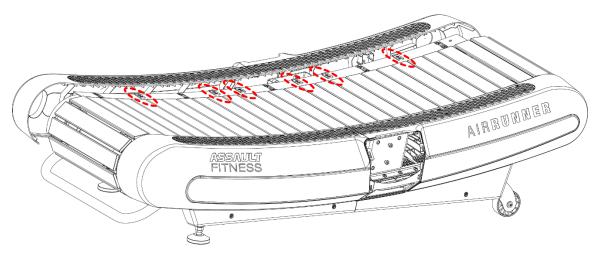


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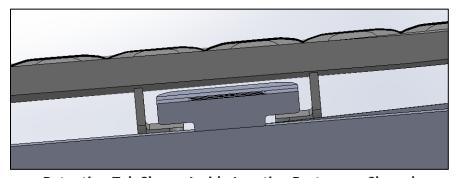
10. The main shrouds can now be reinstalled. To install each shroud, the locating features on the underside of the top surface of the shroud needs to be aligned with the retention tabs on the top of the side rail. With the locating features and retention tabs aligned the shroud can be slid on to the base frame.



**Locating Features on Shroud** 



**Retention Tabs on Frame Rail** 



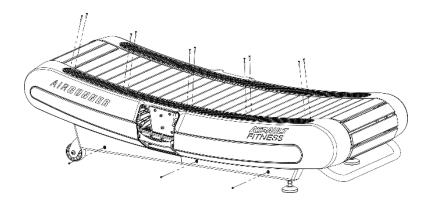
**Retention Tab Shown Inside Locating Feature on Shroud** 

NOTE: If the retention tabs do not slide inside of the locating features then the shroud will bow when the screws are reinserted. If this happens then remove the screws and slide the shroud away from the frame and reattempt to align shroud properly.



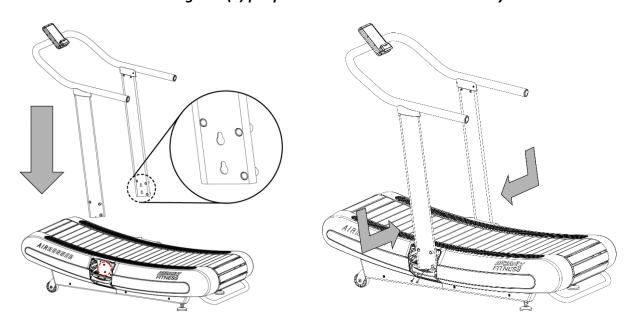


11. Reattach the shroud, using the 10 top screws and 3 lower screws shown below that were removed during Step 4 above. Left side shown. Repeat for right side.



12. To reinstall the handrail assembly align each upright tube with the accommodating feature in the base frame. Lower the handrail assembly down and over the base frame. Note that the bottom of each upright tube will need to be pulled outwards slightly to clear the heads of the locating screws as the handrail assembly in lowered into position. To secure the handrail assembly, make sure that the locating screws are aligned with the inverted keyhole features at the base of the upright tubes. The bottom of each upright tube will "snap" inwards towards the belt when the locating screws are properly aligned with the keyhole features. At the point the handrail assembly should be supported by the locating screws so that the base bolts can be reinstalled.

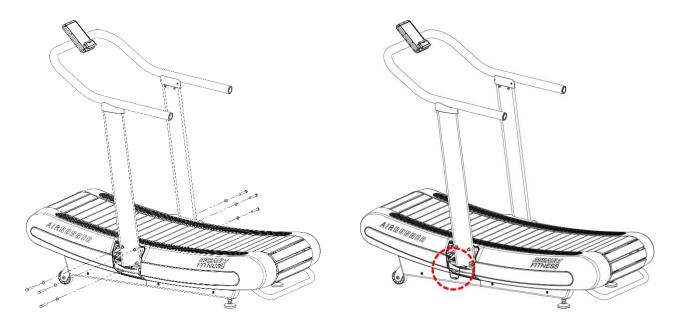
Note: We recommend using two (2) people to install the handrail assembly.







13. Install the handrail base bolts and washers to secure the uprights to the base frame using the 16 mm wrench. Next, plug the cable found coming out of the frame base into the cable coming out of the bottom of the left upright tube and feed the cable into the frame cavity to allow for the center shroud to be reinstalled.



14. Reinstall the center shroud cover and secure with the retaining screws. Left side shown. Repeat process on right side.

