

## FUN KART NOT REACHING TOP SPEED

TSB170

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**Models affected:**

3171 Black Widow, 5210 Marauder where the VIN 10th and 11th characters are:

- JK, JL or
- GA, GB, GC, GD, GE, GF

**Description of problem:**

Vehicle does not reach top speed.

**Solution:**

Inspection and removal of restrictor washer.

**Tools required:**

Tape Measure	12mm open end wrench
8mm socket and ratchet	#2 Phillips screw driver
Hammer	

**! WARNING** To avoid possible injury, always use proper safety practices and equipment when attempting repairs to a vehicle.

- This includes the use of safety glasses and proper tools.
- This includes disconnecting the battery if the kart is equipped with one
- This includes **NEVER** working on the vehicle with the engine running

**Procedure:**

- 1 BELT GUARD REMOVAL**  
Remove the belt guard from the vehicle by removing the (3) perimeter bolts using the 8mm socket and ratchet, and the phillips head screw at the rear of the cover. Ref Fig 1.
  - a. Removal of the belt guard will expose the drive system. Ref Fig 2.
  
- 2 MEASUREMENTS**  
Using a Tape Measure, measure the distance on the driver pulley from the fixed sheave to the edge of the outer shell. Ref figure 2.
  - Fig 3 – IF the distance measures 1 5/8", the speed reduction spacer will need to be removed. Go to step 3.
  - Fig 4 – IF the distance measures 1 1/2", the pulley is set to the proper specification. Re-install the belt guard cover. No further action required.
  
- 3 SPEED REDUCTION SPACER REMOVAL**  
If the Driver Pulley measures 1 5/8" per step 2, the speed reduction spacer will need to be removed to restore the proper top speed on the unit. To remove the spacer:
  1. Loosen the Driver Pulley bolt and flat washer by turning counter clockwise with a 13mm wrench. Initial loosening of the bolt will require tapping the wrench with a hammer to break the bolt loose.
  2. Remove the outer sheave as an assembly exposing the belt and fixed sheave.
  3. With the outer sheave assembly removed, the Speed Reduction Spacer will be exposed. Ref Fig 6.
  4. Remove the Speed Reduction Spacer and re-assemble the outer sheave assembly in the order as shown in Fig 5.
  5. Install the Driver Pulley Bolt and Flat Washer by turning clockwise into the crankshaft. To tighten, firmly pull the engine pull rope out of the recoil (approx. 6") and snug Driver Pulley Bolt until tightened.
  6. Re-Install the belt guard.

**! WARNING** Guard must be in place during engine operation. Keep hands, feet and loose garments away from the engine, chain, and drive components.

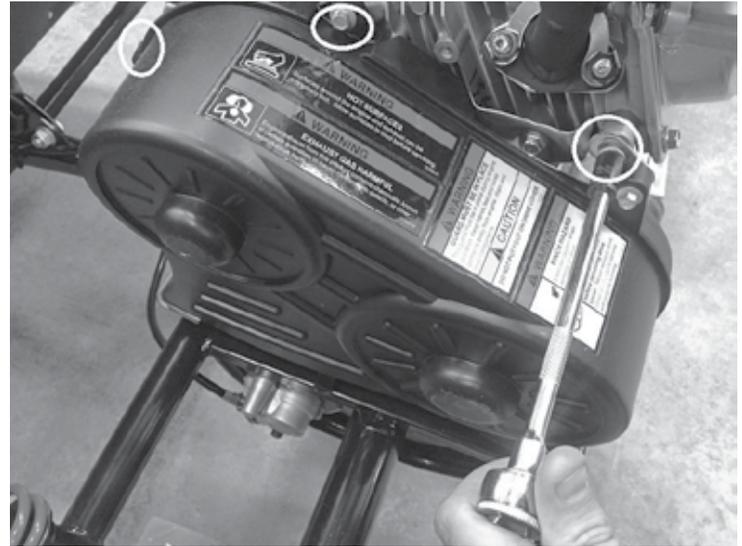


fig. 1

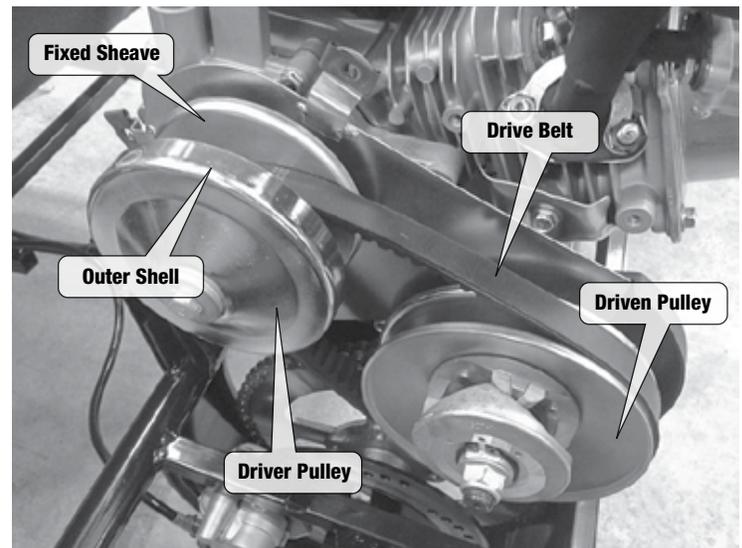


fig. 2

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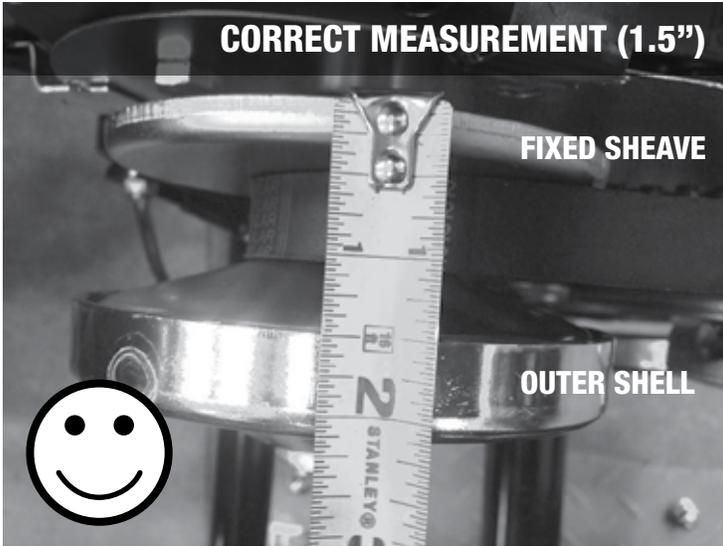


fig. 3

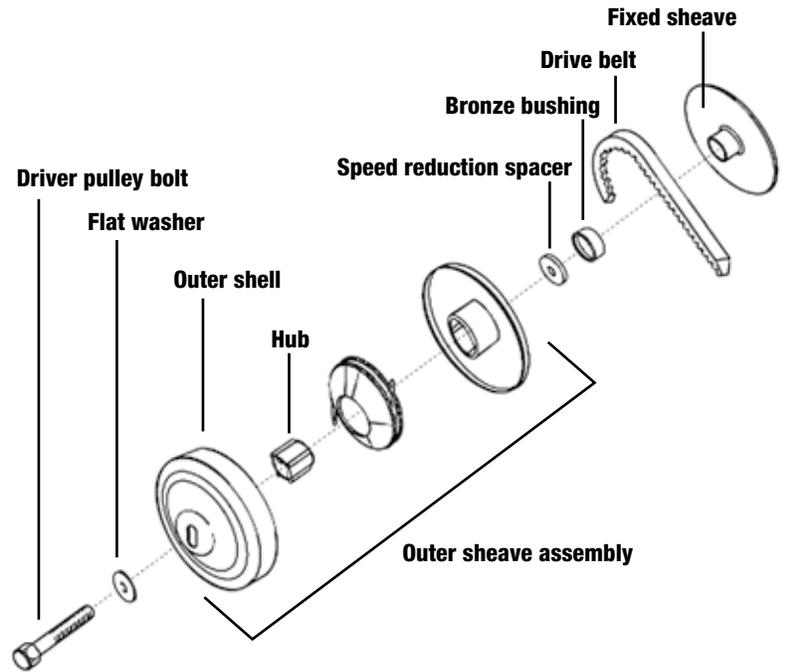


fig. 5 Driver Pulley Assembly

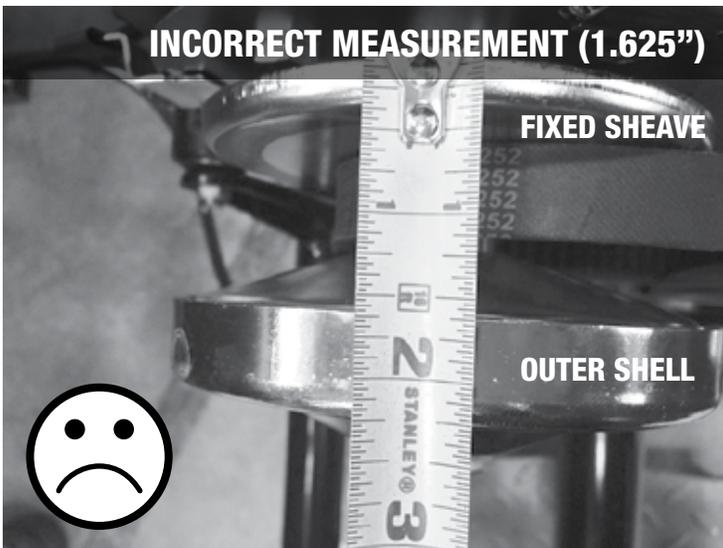


fig. 4

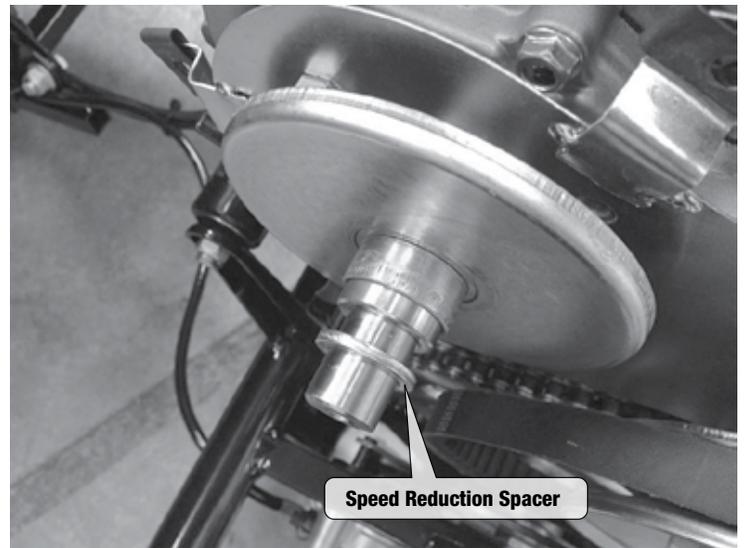


fig. 6