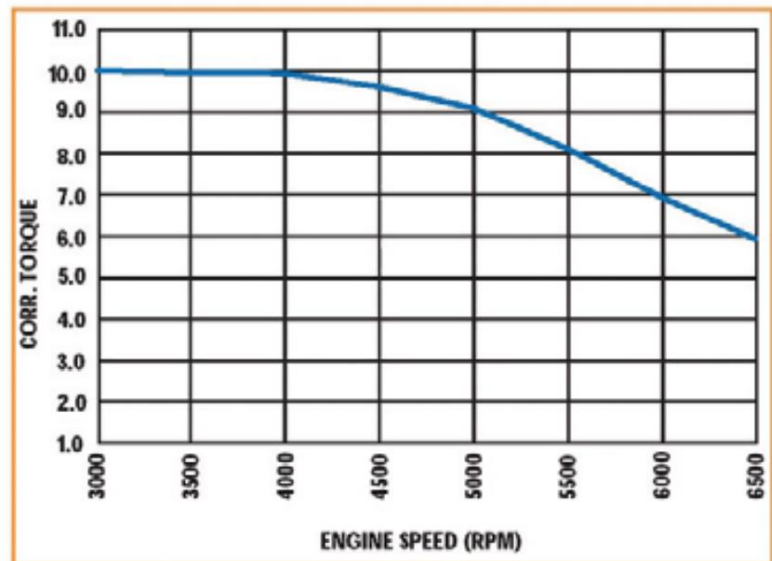


# Clutch Recommendations

- Target RPM for engagement is 3200-3200. This will put you in peak torque range of the Briggs LO206. The Briggs LO206 will start to hit peak torque at 3100-3200 RPMs and hold it level up to 4000 RPMs. (see chart)
- Engaging at peak torque will give you the fastest acceleration off a slow corner. (note: some tracks corners are not low speed enough for the clutch to disengage, in this case setting clutch engagement is meaningless)
- To set a drum clutch engagement, you will need to install the correct clutch springs. This will set the correct tension and provide the optimal engagement of 3000-3200 RPMs.
- Ensure there is endplay and the clutch spins freely.



- LO206 approved clutches include:  
Inferno Racing by Hilliard (Fire, Flame, Blaze or Fury), Max-Torque (Draggin Skin or SS), and Noram/Premier (Magnum, GE, Ultimate or Stinger).
- The most commonly used clutch with LO206 are the Hillard Flame and Noram Stinger. The Hillard Fire clutch is a good performing clutch when new, but the shoes tends to wear much too quickly leading to bad performance. I would use the Flame vs. Fire.
- To get correct RPM engagement with the Hillard Flame clutch you want to use 2 black springs and 2 white springs.
- To get correct RPM engagement with the Noram Stinger clutch you want to use orange springs.
- Kart-start also recommends using a high-quality grease on the roller bearings of your clutch. Use a grease that is certified by the National Lubricating Grease Institute (NLGI) and has the GC-LB designation for use with bearings, Grease that doesn't have proper heat resistance will cause the bearings to wear and potentially fail. Kart-start offers small 1.5oz containers of Timken Racing Bearing Grease. This grease is high quality and has NLGI certification. It is designed specifically for racing roller bearings.
- Use sprockets with 219 chain. 219 will provide better performance than 35 chain as it is lighter and has less rolling resistance. 35 chain has been popular for 4-cycle, but 219 will perform better.



## Clutch Maintenance

- Tools required
  - Impact gun
  - ½ socket (3/8")
  - 220 grit sandpaper
  - Snap ring pliers
  - Flat head screw driver
  - Brake clean
  - Rags
  - Synthetic high temp grease (red/purple)



1. Using an impact gun and a ½ socket, remove the retaining bolt and washer
2. Using snap ring pliers remove the snap ring on the outside of the clutch (side opposite of the sprocket)
3. Remove crank key
4. Pull clutch apart by removing drum from shoe assembly
5. Using snap ring pliers remove the snap ring retaining the bearings inside of the sprocket
6. Remove the bearings
7. Using brake clean, remove all grease and dirt from the inside of the drum. Use rag to ensure all grease and dirt are removed
8. Check to ensure the snap ring on the sprocket is secure and not coming loose.
9. Use brake clean to remove all grease and dirt from the clutch shoes.
10. Using sandpaper, sand the inside of drum to create a rougher surface and remove the sheen and will develop from use.
11. Using sandpaper, sand the brake shoes to also remove sheen from them.
12. Using screen driver, scrap any dirt out of the channels between the brake shoes
13. Lubricate the bearing with high temp synthetic grease, Use a high quality grease. Look for the NLGI certification.
14. re-assemble bearings through the sprocket and insert the snap ring to lock in place.
15. Re-assemble the brake shoe assembly into the drum and insert snap ring to lock in place.
16. Re-insert the crank key
17. Re-install the clutch on the engine. Very important to use a radius washer on the inside of the crank. There should be no end play Each clutch will have their own radius washer.

For proper clutch installation watch Briggs video:

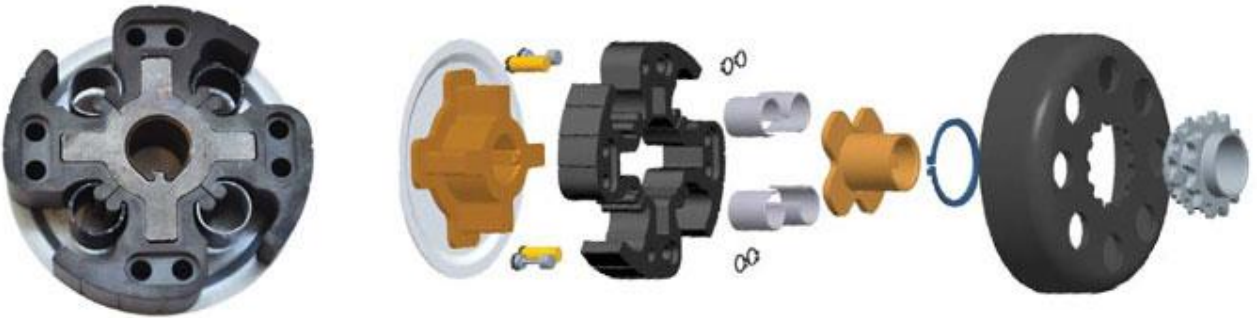
<https://www.youtube.com/watch?v=rLs0ZRfhDaA>

## LO206 Clutch Rule

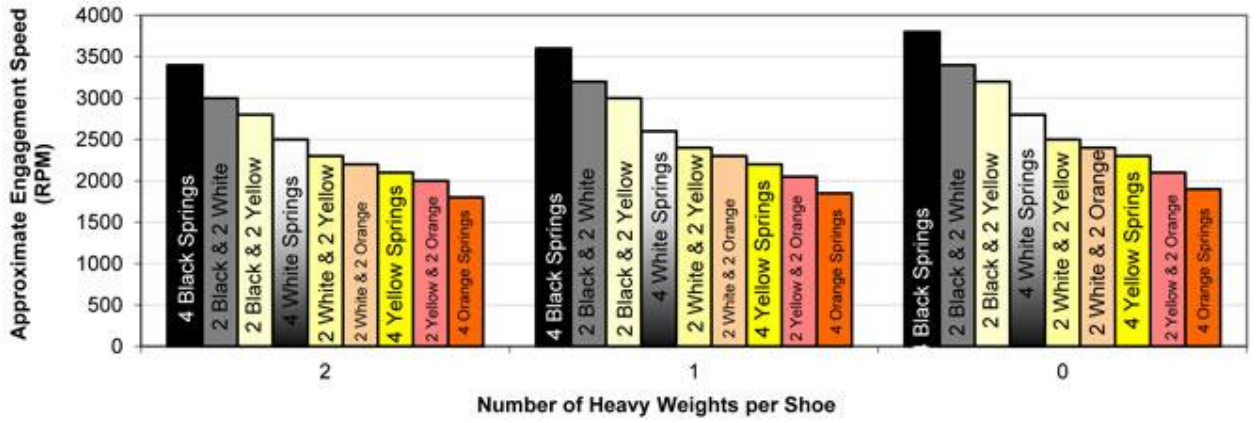
- a. Novice class must run the supplied Max-Torque clutch, part #555727. No alteration to the clutch is allowed. Springs, driver (when applicable) and clutch key are non-tech.
- b. Sportsman, Junior 1, Junior 2, Senior, and Masters Classes must run one of the following clutches:
  1. Inferno Racing by Hilliard: Fire, Flame, Blaze or Fury
  2. Max-Torque: Draggin Skin or SS
  3. Noram/Premier: Magnum, GE, Ultimate or Stinger

\* \* NOTE: Noram/Premier Stinger must be converted to stamped drum (Noram P/N 01600715) by May 5, 2020 to be legal for competition.
- c. Sprocket conversion drums/kits manufactured by Inferno by Hilliard, Max-Torque or Noram may be used. Sprocket conversion drums/kits from other manufacturers are prohibited.
- d. Refer to Page 20-24 for diagrams/photos of approved clutches
- e. Clutch or sprocket conversion drum/kit must be used as shipped from the original manufacturer – Inferno by Hilliard, Max-Torque or Noram. Mixing of parts between clutch lines, manufacturers or removing parts (i.e.; grease guard, etc.) is prohibited. No alteration or machining to the clutch allowed except light sanding to shoe and drum mating surface for maintenance.
- f. Interchangeable drivers (i.e.; 15T, 16T, etc) and driver configuration (#35 or 219), driver clip/lock, clutch key, and crankshaft fastener kit are non-tech. OEM springs and weights MUST remain unmodified, OEM but are a racer's choice. Clutch coolers are not allowed. The use of aftermarket coatings is prohibited.
- g. Clutch Claim Rule: Per standard sanctioning body guidelines, claiming can be implemented, maximum of \$160.00.
- h. Manufacturers who wish to be considered for future rule sets may submit requests to: [briggsracing@basco.com](mailto:briggsracing@basco.com)

# Inferno Flame Clutch



**HILLIARD INFERNO - FLAME**  
Engagement Speeds Vs. Number of Heavy Weights per Shoe



# Premier Stinger Clutch



<b>PREMIER STINGER</b>		<b>GO KART CLUTCH SPECIFICATIONS</b>		Spring Chart Exploded View, Outboard Exploded View, Inboard	◀ ▶
SPRING NO.	SPRING COLOR	PRE-ENGAGEMENT	ENGAGEMENT		
01000051	Blue	2700 rpm	2900 rpm		
01000052	Orange	3000 rpm	3200 rpm		
01000053	Black	3300 rpm	3500 rpm		
01000054	Yellow	3700 rpm	3900 rpm		
01000055	Purple	4100 rpm	4300 rpm		
01000056	White	4500 rpm	4700 rpm		
01000057	Green	5000 rpm	5200 rpm		