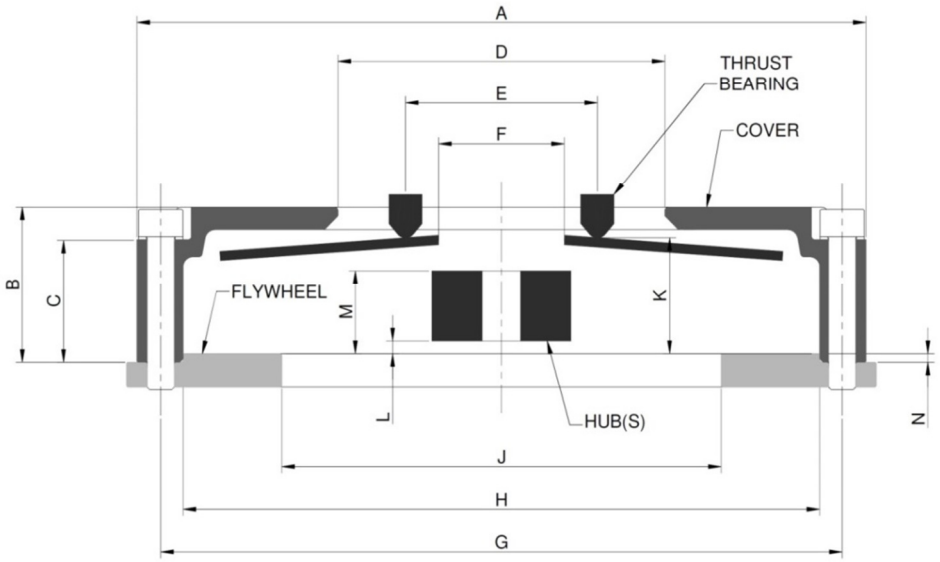
TTV	Clutch Installation	Doc Number: 3636-01-500	Revision: D
	Title: 3636 Series – 215mm Single Plate Race Clutch	Author: SRV	Effective Date: 29/01/16



Clutch Dimensions

Dim	Description	mm	in
A	Diameter of cover	248	9.764
B	Height of cover	39.5	1.555
C	Grip height	31.5	1.240
D	Minimum inside diameter of cover	115	4.528
E	Min/max thrust bearing fulcrum diameter	45/50	-
F	Minimum inside diameter of spring fingers	39.5	1.555
G	Mounting bolt/stud PCD - BASIC	232	9.134
H	Flywheel spigot diameter +0.05/-0.05	219.050	8.624
J	Flywheel inner diameter +0/-2	152	6.220
L	Clutch face to start of hub(s)	2.5	0.098
M	Clutch face to end of hub(s)	17	0.669
N	Flywheel spigot step height +0.04/-0.04	2.5	0.098

Clutch Performance Specifications

Clutch Type	Setup Height "K" mm (in)		Torque Capacity Nm (lbft)	Release Load Kg (lbs)		Spring Thickness mm (in)	Pressure Plate Ratio
	New	Worn		New	Worn		
3636-02-500	31.0 (1.220)	35.8 (1.409)	492 (363)	224 (493)	245 (539)	2.8 (0.110)	-
3636-02-501	29.8 (1.173)	34.6 (1.362)	588 (434)	275 (605)	285 (627)	3.0 (0.118)	-

- Setup heights are from flywheel friction face and based on using an Ø50mm release bearing. Heights are subject to a tolerance of ±0.5mm.
- Release loads are based on an Ø50mm release bearing. A smaller diameter bearing will reduce release loads.

⚠	Race clutches, due to their light weight, are very sensitive to the heat caused by excessive slippage and abuse. Manoeuvring around pits, driving up steep inclines/onto trailers and slipping the clutch on slow corners should be avoided. Prolonged exposure to high heat can cause failure and permanent damage to the clutch system.

Clutch Mass and Inertias

Clutch Type	Assembly Mass Kg (lbs)	Assembly MMOI $Kg.m^2$ ($lb.in^2$)
3636-02-500	3.452 (7.594)	0.0299 (102.17)
3636-02-501	3.49 (7.678)	0.0300 (102.52)

- Mass and inertias are for cover assemblies only.

Flywheel Specifications

- Flywheel material should be a fine grained steel with 0.40/0.50% carbon content and a hardness of 285HB30 (30HRC) minimum.
- Friction surface either ground or turned to a surface finish of 0.8µm Ra (N6) maximum.
- Friction surface run out 0.08mm maximum at mid-radius of friction surface when assembled onto crankshaft.
- Clutch mounting spigot I.D run out 0.03mm maximum when assembled onto crankshaft.

Fixing/Mounting Fastener Specifications

- Clutch should be fastened using either M8 studs and mechanical locking nuts or M8 Cap head screws and safety washers.
- Fastener strength should be grade 10.9 minimum.
- Fasteners to be gradually tightened to 22Nm (16lbft) in a criss-cross pattern.

Quantity	Hole/Thread Size mm	Tolerance mm
6	Ø8.013 ±0.008	⌖ Ø0.15Ⓜ EQUI SP ON PCD "G"
6	M8x1.25-6H x 7.0 minimum full thread	⌖ Ø0.15Ⓜ EQUI SP ON PCD "G"

Release Bearing Specification

- Release bearing should be of the steel caged, flat nose type. Nominal Ø50mm diameter.
- Release bearing travel must not exceed 10mm and should be limited by an external stop.
- Release bearing should be free of the spring fingers when clutch is fully engaged.

Maintenance

- Regular inspection and maintenance of the clutch is recommended for optimum performance over the life of the clutch.
- Excessive "blueing" of the pressure plate indicates high heat generation from slippage and the clutch should be sent back to TTV Racing for evaluation of clamp load and warping.
- Pressure and drive plates should be checked for flatness and wear.

Type	Thickness mm (in)		Flatness mm (in)
	New	Worn	
Pressure Plate	16.0 (0.630)	15.8 (0.622)	0.10 (0.0039)
Drive Plate	8.0 (0.315)	6.7 (0.264)	0.15 (0.0059)

- Total wear of whole assembly should not be more than 1.3mm.

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