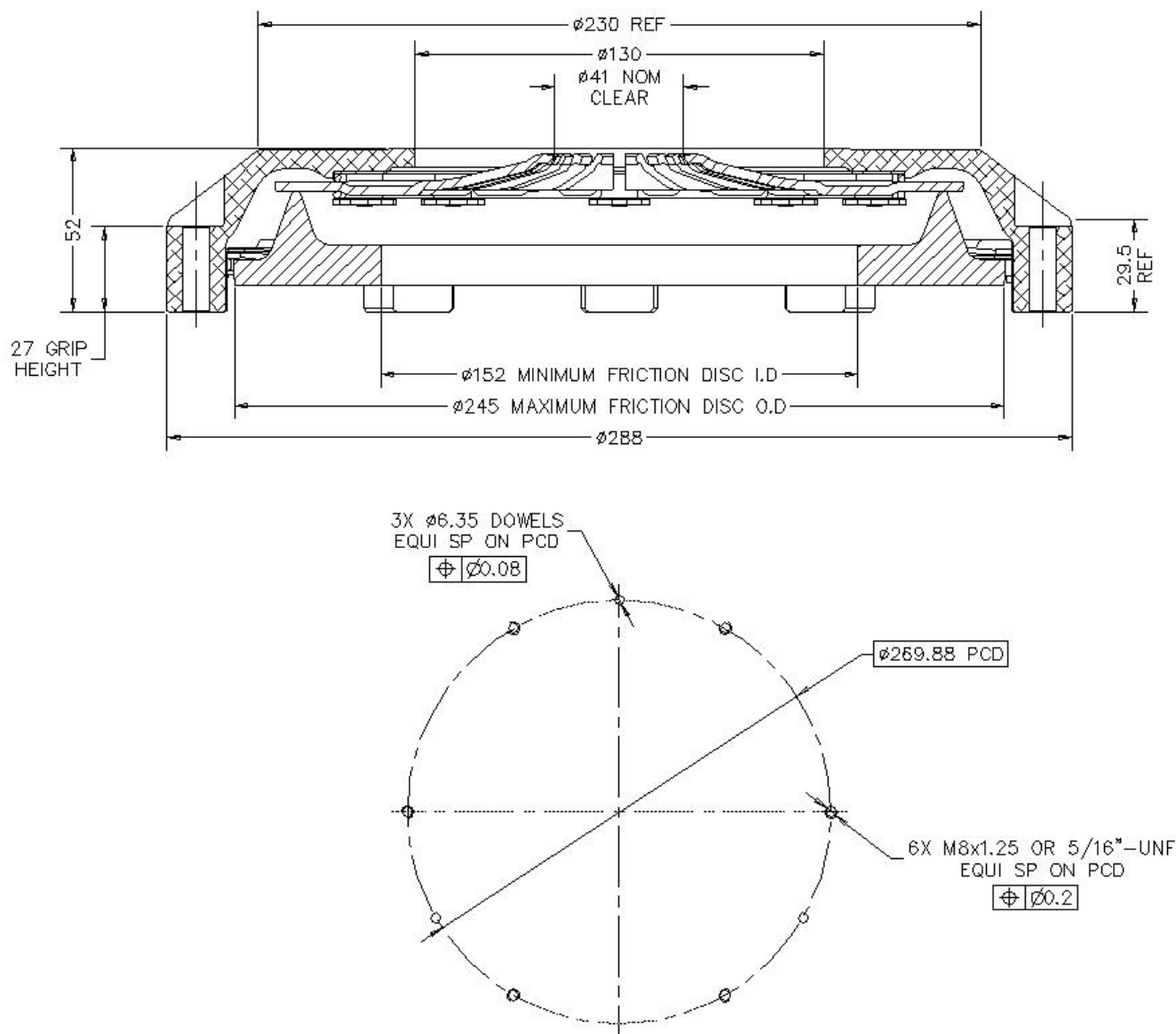


|                                                                                   |                                                           |                            |                             |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------|----------------------------|-----------------------------|
|  | <b>Clutch Specifications</b>                              | Doc Number:<br>4600-01-001 | Issue:<br>5                 |
|                                                                                   | Title:<br>4600 Series – 9.5" DS Style Single Plate Clutch | Author:<br>SRV             | Effective Date:<br>01/10/21 |

## Clutch Dimensions



Note that there are two versions of this clutch, "Road" and "Race". Road version has a pressure plate with drive straps to aid clutch release like the original OEM clutch. Race version has no drive straps and is dog-driven by the clutch basket legs. Road versions can be easily converted to "Race" if driving style or usage changes. If the vehicle is being used regularly for track days or circuit use it is highly recommended to use the "Race" version.

## Drive Plates

Drive plates should have friction faces within the minimum and maximum friction disc diameter requirements and have a clamped thickness of  $8.38 \pm 0.05$ mm. TTV Racing can supply drive plates in either organic or cerametallic facings, sprung or solid hub.

Our Supply of Goods Terms & Conditions can be found on our website under Info & Downloads.

TTV Racing parts are designed for motorsport requirements only and have not been designed/ tested/ homologated for road use. Installation of these parts may void vehicle manufacturers warranty coverage and/ or may cause the vehicle to be illegal in some countries. Please check with local laws on the road use of your vehicle. TTV Racing reserves the right to make product improvements and changes without notice.

|                                                                                   |                                                           |                            |                             |
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## Clutch Performance Specifications

| Clutch Type (Spring Colour) | Setup Height, mm |      | Torque Capacity<br>Organic/ Cerametallic,<br>Nm (lbft) | Max<br>Release<br>Load, Kg | Spring<br>Thickness,<br>mm |
|-----------------------------|------------------|------|--------------------------------------------------------|----------------------------|----------------------------|
|                             | New              | Worn |                                                        |                            |                            |
| 4600-04-001 (Silver) – Road | 49.1             | 56.6 | 418 (308) / 627 (462)                                  | 245                        | 3                          |
| 4600-04-002 (Gold) – Road   | 49.7             | 57.2 | 637 (470) / 957 (706)                                  | 355                        | 3.5                        |
| 4600-04-003 (Orange) – Road | 48.9             | 56.4 | 387 (285) / 580 (428)                                  | 215                        | 2.8                        |
| 4600-04-004 (Silver) – Race | 49.1             | 56.6 | 418 (308) / 627 (462)                                  | 245                        | 3                          |
| 4600-04-005 (Gold) – Race   | 49.7             | 57.2 | 637 (470) / 957 (706)                                  | 355                        | 3.5                        |
| 4600-04-006 (Orange) - Race | 48.9             | 56.4 | 387 (285) / 580 (428)                                  | 215                        | 2.8                        |

- Setup heights are from flywheel friction face. Heights are subject to a tolerance of  $\pm 0.5$ mm.
- Release loads are based on a nominal  $\varnothing 50$ mm release bearing.

## Clutch Mass and Inertias

| Clutch Type | Assembly Mass, Kg | Assembly MMOI, Kg.m <sup>2</sup> |
|-------------|-------------------|----------------------------------|
| 4600-04-001 | 6.199             | 0.0693                           |
| 4600-04-002 | 6.302             | 0.0699                           |
| 4600-04-003 | 6.146             | 0.0690                           |
| 4600-04-004 | 6.155             | 0.0685                           |
| 4600-04-005 | 6.258             | 0.0691                           |
| 4600-04-006 | 6.102             | 0.0682                           |

- Mass and inertias are for cover assemblies only and are estimated values.

## Release Bearing Specification

- Release bearing should be of the steel caged, flat nose type. Nominal  $\varnothing 50$ mm fulcrum diameter.
- Release bearing travel must not exceed 10mm and should be limited by an external stop. Ensure spring fingers do not contact drive hubs
- Release bearing should have enough backwards travel to allow the bearing to be free of the spring fingers when clutch is fully engaged at maximum wear.

## Maintenance

| Type           | Thickness mm |      | Flatness mm |
|----------------|--------------|------|-------------|
|                | New          | Worn |             |
| Pressure Plate | 29.4         | 29.2 | 0.1         |
| Drive Plate    | 8.38         | 7.38 | 0.15        |

- Total allowable wear shall be no more than 1.2mm for the whole assembly.
- Regular inspection and maintenance of the clutch is recommended for optimum performance over the life of the clutch.
- Pressure and drive plates should be checked for flatness and wear.