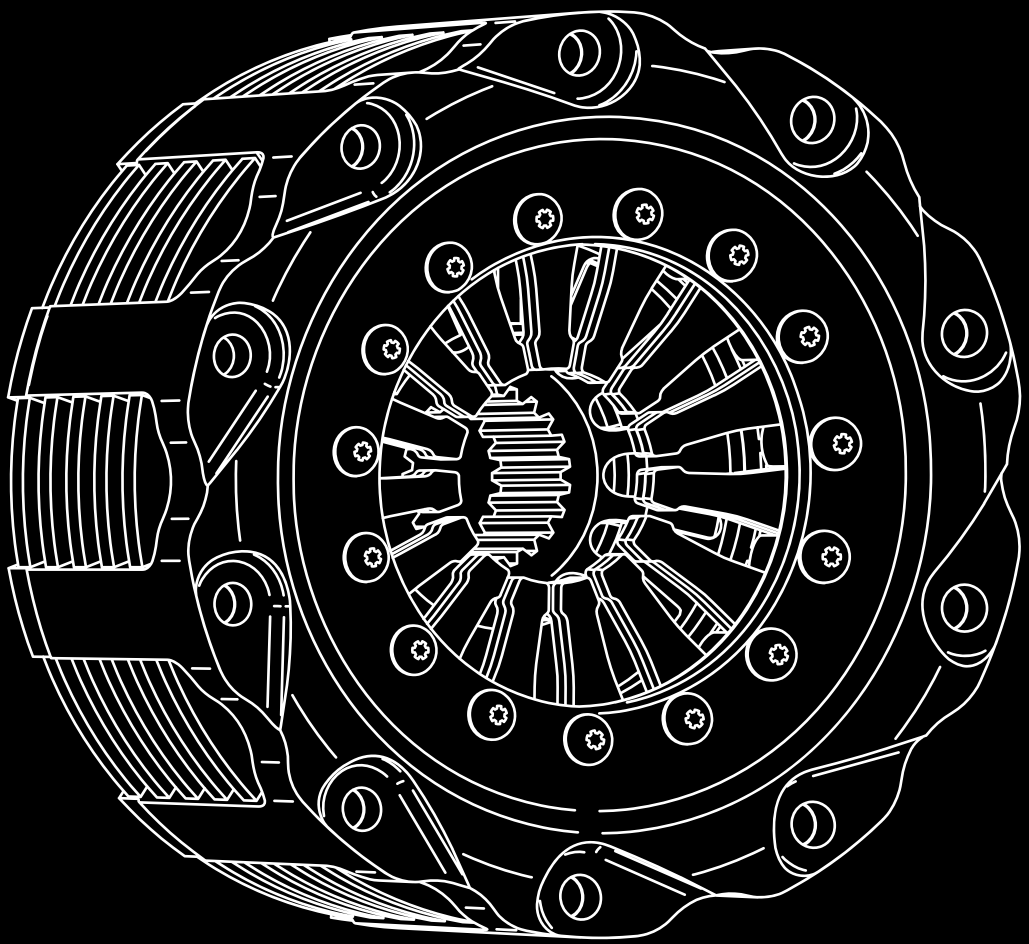
tilton

DRIVELINE COMPONENTS



A Tradition of Innovation and Excellence in Driveline Components

Since 1972

In 1972, McLane (Mac) and Adelle Tilton founded Tilton Engineering in El Segundo, California. Tilton Engineering's mission was to establish a reputation as a technological leader in racing components and make them available to everyone. Mac utilized his vast racing and machining experience, most notably as the Chief Machinist for the Trans Am championship winning Brock Racing Enterprises (BRE), to develop some of the most innovative products of their time. Adelle's excellent business sense and experience, along with the financial resources to seed the company, resulted in a long-term future for Tilton Engineering. Mac's focus was the technical, manufacturing, design and practical racing experience.

As Tilton Engineering's reputation grew, and the demand for their products increased, Tilton relocated in 1979 to a larger facility in Buellton, California. This is where Tilton Engineering is still located. Even though the location is the same, Tilton has continued to evolve to meet the changes of the industry.

Today, Tilton Engineering is still a family owned business and is directed by Arthur Tilton, Mac and Adelle's son. Art's passion for the sport, design experience, meticulous eye for detail and business sense has grown Tilton Engineering to become a world leader in the racing industry. In fact, Tilton Driveline Components are chosen by the majority of NASCAR Nextel Cup teams and were selected as the controlled clutch for the Champ Car World Series and Champ Car Atlantic Series.

Our main goal is to deliver the highest quality products, on time, at the best possible value. We know that having the right company culture and work environment is the key to maintaining a reputation as a world leader. This includes investing in the best employees, technology, equipment and facilities. In fact, many employees have worked at Tilton for over 10 years and have established close, long-term relationships with customers.

Of course, our success wouldn't be possible without the support of our valued worldwide network of distributors, who are some of the very best in the industry. Our distributors understand their markets and make significant investments in inventory to best serve their customers. They, along with our employees, provide the customer with top-level service and technical support.

In closing, we would like to thank all of our customers who have relied on Tilton products over the last 35 years and welcome all new customers to experience the Tilton Difference. We invite you to contact us and always welcome your comments.

Sincerely,

tilton ENGINEERING INC

Official Supplier of CHAMP CAR®

Photo courtesy of PKV Racing

We would like to sincerely thank all of our customers for making our 35th Anniversary possible and look forward to serving you for many years to come.

Mclane Tilton
Co-Founder

Adelle Tilton
Co-Founder

Arthur Tilton
Chief Executive Officer

Since 1972, Tilton has grown to become one of the most widely used and successful clutches in racing. Tilton OT-Series clutches have earned a reputation of providing the highest levels of quality, performance and reliability.
This reputation has led OT-Series clutches to claim numerous major race victories and championships each year.

OT-Series clutches are CAD-designed, precision CNC machined from the finest materials and meet strict quality control requirements. A wide variety of OT-Series clutches are available to meet the needs of most racing and high-performance applications.

OT-Series clutches are available in Sintered Metallic Racing, Cerametallic, Carbon and Hybrid models.

Features

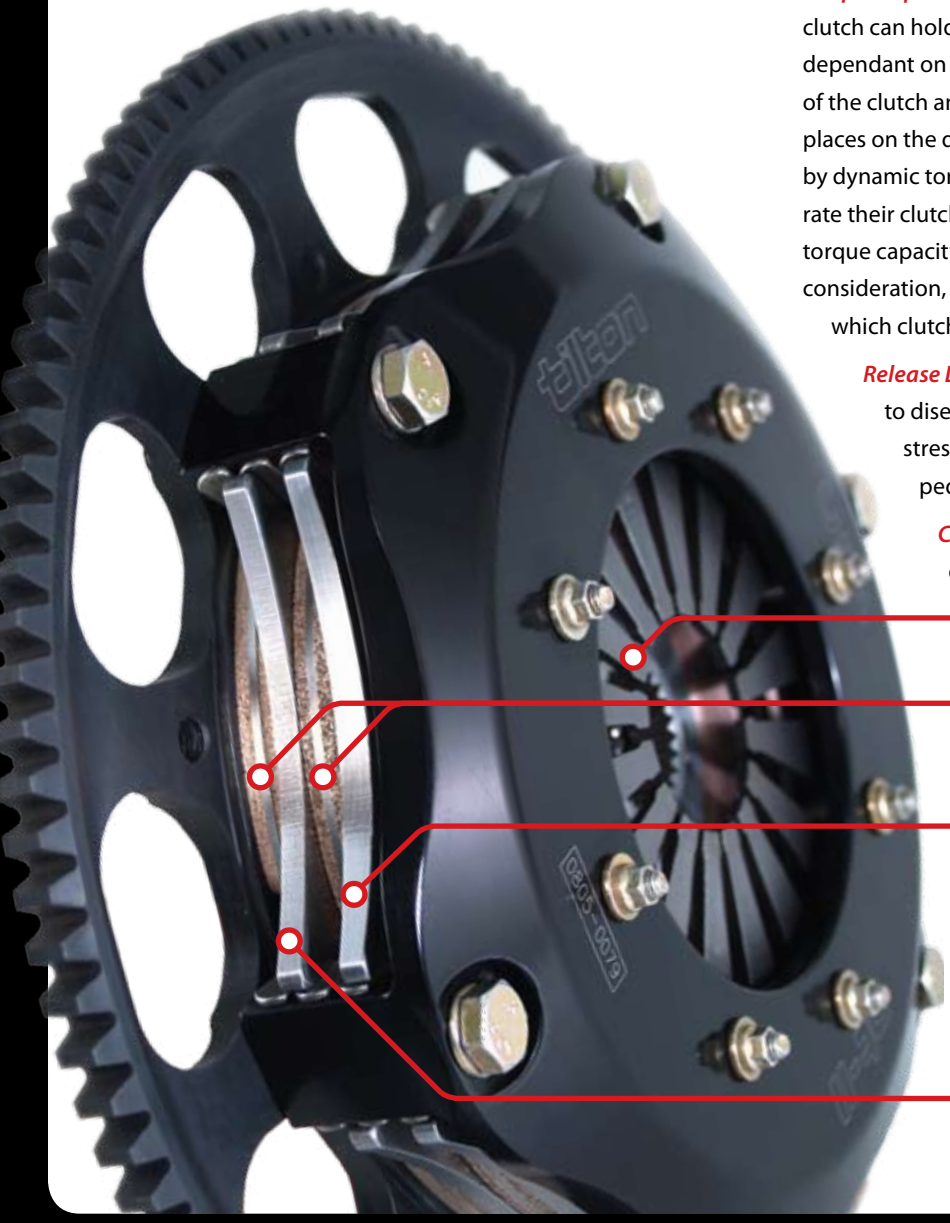
- Open clutch cover design for cooler and cleaner operation
- One-piece clutch cover has a high burst strength and minimal deflection for quick shifting
- Chrome vanadium diaphragm springs and an engineered pressure plate geometry provide a high clamp load-to-wear ratio, low release load and quick shifting
- Low Moment-of-Inertia (MOI) for quick engine acceleration and deceleration
- High torque capacity
- Individually balanced

Clutch Terminology

Torque Capacity: The amount of engine torque that the clutch can hold before slipping. Torque capacity of a clutch is dependant on the number of driven plates used, the diameter of the clutch and the clamp load that the diaphragm spring places on the driven plates. Tilton OT-Series clutches are rated by dynamic torque capacity. Some clutch manufacturers rate their clutches by breakaway torque capacity. Dynamic torque capacity takes torque spikes from engine firing into consideration, better representing the conditions under which clutches operate.

Release Load: Force required on the diaphragm spring to disengage the clutch. Lower release loads put less stress on the engine's thrust bearings and reduces pedal effort.

Clamp Load: Force applied by the clutch's diaphragm spring onto the driven plates.



Diaphragm Spring: The Belleville spring located in the clutch cover.

Driven Plate(s): The plate(s) within the clutch assembly that drive the transmission's input shaft.

Pressure Plate: The plate directly under the clutch's diaphragm spring, containing the fulcrum point where clamp load is placed onto the driven plates.
Many Tilton OT-Series clutches are available with two pressure plate ratio options, High or Ultra-High.

Floater Plate: The plate(s) that separate the driven discs on multi-plate clutches.

There are many considerations when choosing a clutch. The selection of clutches on the market is quite large, with a wide range of diameters, friction materials and disc counts. The general rule in selecting a racing clutch is to choose the smallest clutch diameter allowed by sanctioning body rules, determine how many discs it takes to meet your engine's torque capacity, and add one additional plate for heat capacity and durability reasons. The following is a list of factors to consider when selecting the right clutch for your application.

Sanctioning Body Rules

If you are selecting a clutch for use in a sanctioned racing series, you will want to start by checking the clutch rule of the sanctioning body. Most sanctioning body rules specify a minimum clutch diameter. The minimum clutch diameter rule is based on the diameter of the friction/driven discs, not the diameter of the entire clutch. This rule keeps the mass moment-of-inertia to a minimum. In addition, rules typically specify acceptable clutch friction materials. Racing clutch friction materials, as far as racing sanctioning body rules are concerned, are divided into two categories: metallic and carbon.

Clutch Types

Tilton offers four clutch types in the OT-Series line: Sintered Metallic Racing, Cerametallic, Hybrid and Carbon

Sintered Metallic Racing

Tilton OT-Series metallic clutches feature discs with a sintered metallic friction material, and is the most durable of the non-carbon materials. The thin (.104") friction disc offers low inertia, has excellent wear resistance and withstands fairly high temperatures. In circle track and road racing, metallic clutches are the most common, largely because many racing sanctioning bodies do not allow carbon clutches for cost saving measures. See page 2 for further information on OT-Series metallic clutches.

Cerametallic

Tilton OT-Series cerametallic clutches feature discs with a blended ceramic and metallic friction material. Compared to the metallic clutch, the friction material is thicker (.236" - .314"; depending on clutch size). The increased thickness of the friction material provides for higher heat capacity, such as the heat generated during clutch slippage/modulation. In addition, the material is smoother engaging than sintered metallic friction material. Because of these features, cerametallic clutches are often used for autocross, rally, off-road, drag racing and street/strip applications. See page 14 for further information on OT-Series cerametallic clutches.

Hybrid

Tilton OT-Series hybrid clutches feature one cerametallic disc and one organic disc within one assembly. The result is a clutch assembly that offers a compromise between the heat capacity and durability of the cerametallic disc, and the smoother engagement characteristics of organic discs. Hybrid clutches are typically used in high-performance street applications. See page 20 for further information on OT-Series hybrid clutches.

Carbon

Tilton OT-Series carbon clutches offer many advantages over other friction materials. They are by far the lightest of the clutch types, superior at withstanding high temperatures (will not warp from heat) and have the smoothest engagement characteristics. Although the initial purchase price is higher, their cost per mile is lower, especially when you consider that their smooth engagement can help increase the life of the transmission and other driveline components. In addition, "standard" carbon clutch rebuilds are typically $200-$300. These characteristics make carbon clutches suitable for most forms of racing, as well as high-powered street cars. See page 24 for further information on OT-Series carbon clutches.

Clutch Performance Limits

Torque capacity and ***heat capacity*** are the two main factors that limit clutch performance.

Torque Capacity

Torque capacity refers to the engine torque that the clutch will hold before slippage occurs. Torque capacity ratings among clutch manufacturers cannot be directly compared. Clutch manufactures do not have an industry standard with which they set clutch torque ratings. One can typically compare clutches from the same manufacturer, but not from different manufacturers. Generally, a Tilton OT-Series clutch does not slip until the torque is 50% above the rated torque capacity, making the rating rather conservative. Other clutch manufactures may rate a clutch at the torque level it starts to slip in an effort to provide a more impressive rating.

Heat Capacity

Heat capacity refers to the amount of heat the clutch can withstand before damage or failure occurs. Heat is generated every time the clutch is engaged. The heat generated during engagement is mostly absorbed by the clutch's pressure plate, floater plates and discs. Some heat is also absorbed by the flywheel. The more mass a clutch has, the more heat/temperature it can absorb. As with brakes and tires, higher temperatures do more damage. The same is true with clutches. A clutch with an extra disc will have better heat capacity due to the increased mass, exposing the clutch to lower overall temperatures. Due to it's stability under heat, carbon has the ability to withstand the highest temperatures before being damaged. The racetrack is usually easy on the clutch. It is the paddock (or street) where the clutch must be slipped, raising clutch temperature and causing the most damage. In addition, even if horsepower levels are equal, a heavier car will require more clutch mass (to absorb heat) than a lighter car.

Durability

Durability refers to the service life of the clutch. A smaller diameter clutch, or removing a plate from the clutch, will offer increased performance through a lower inertia. Adding a plate to the clutch, or increasing the diameter of the clutch, will increase the life of the clutch due an increased surface area to wear against. In summary, there is a trade-off to be made between clutch weight and maintenance intervals.

SINTERED-METALLIC CLUTCHES

Tilton OT-Series sintered metallic clutches are primarily designed for racing applications. Utilizing thin sintered metallic discs, these clutches are designed to offer a low moment-of-inertia, high torque capacity and a compact size. Tilton clutch covers are unique in that they feature hardened steel thrust buttons, providing a smooth and durable surface for the pressure plate and floater plates to slide against. These features have made sintered metallic clutches the most commonly used clutch type in racing. Sintered metallic clutches are not recommended for street use.

Today, Tilton OT-Series sintered metallic clutches have become the most widely used clutches in racing. They can be found in NASCAR, Champ Car, Grand Am, ALMS, FIA, ARCA, SCCA, SCORE and most other racing series worldwide.

Using the information gained through track testing and the feedback we receive from customers, OT-Series clutches are continually refined to meet the increasing demands of race teams.

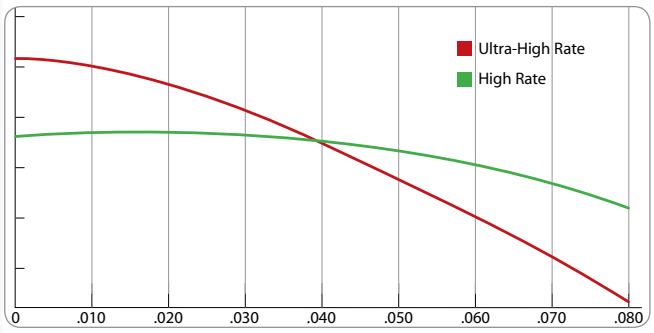
4.5" Metallic - pg.3

5.5" Metallic - pg.5

7.25" Metallic - pg.9

OT-Series Clutch Clamp Load Curves

As standard, OT-Series clutches feature a High ratio pressure plate that provides high clamp load over a wide wear range.
As illustrated in the graph, the clamp load (torque capacity) of the High ratio pressure plate is relatively flat until .030" (.76mm) of wear. As on option, 7.25" clutches are also available with an Ultra-High ratio pressure plate. Ultra-High ratio pressure plates provide 20% more clamp load and diaphragm spring travel (modulation) than High ratio, but have a steeper clamp load curve.



High Ratio Pressure Plate

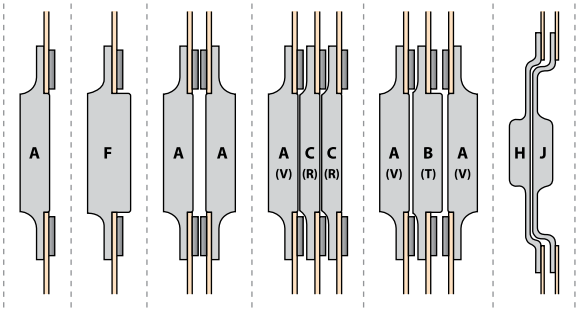
- Standard pressure plate ratio for 4.5"/5.5"/7.25" clutches
- Short release travel for quick engagement and shifting
- Flat clamp load curve

Ultra-High Ratio Pressure Plate

- Optional pressure plate ratio for 7.25" clutches
- 20% more release travel than High ratio for improved modulation
- 20% more clamp load than High ratio for higher peak torque capacity
- Steeper clamp load curve than High ratio

Hub Types

CLUTCH COVER (TOP)



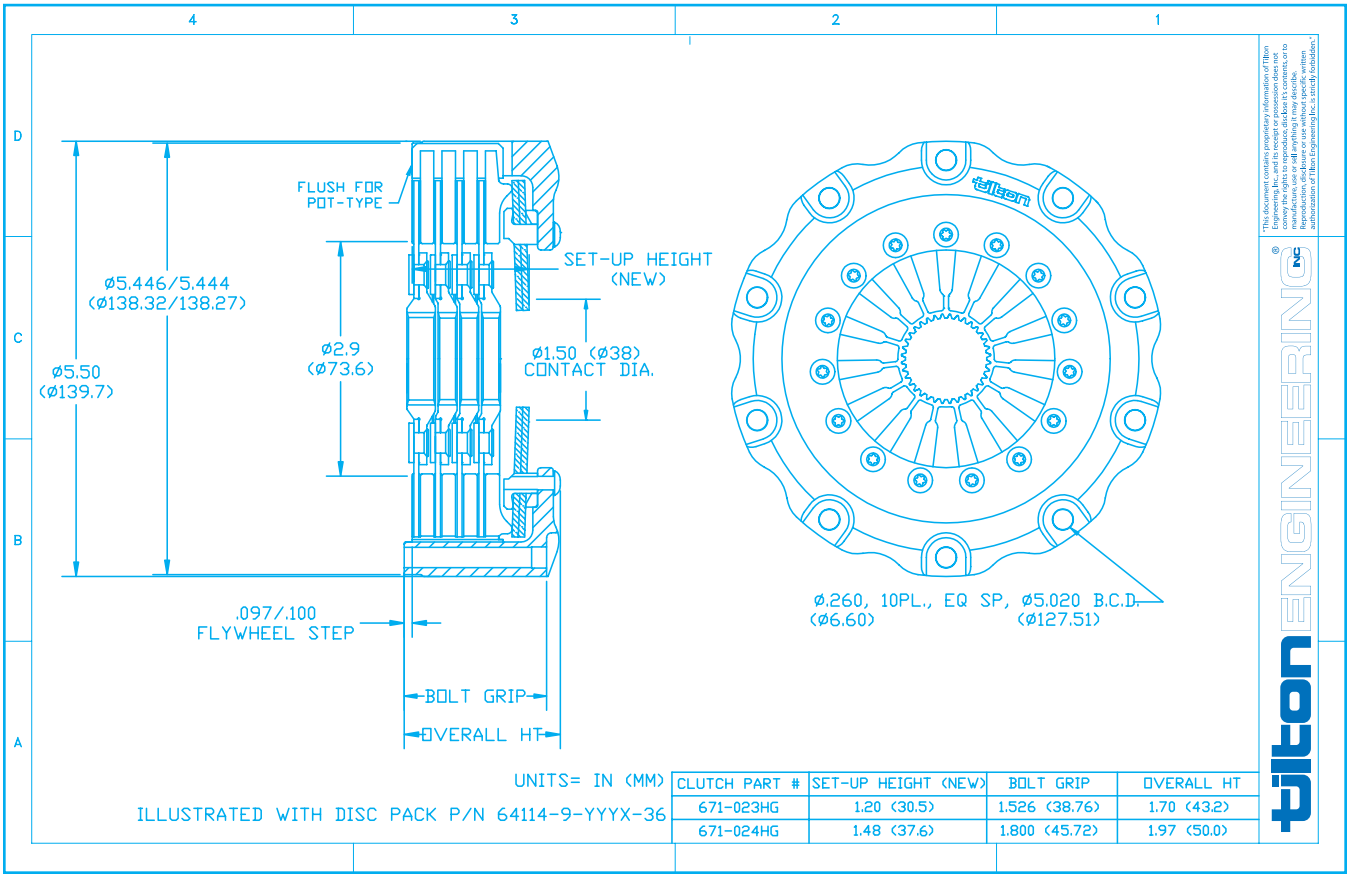
A = Solid, 6 rivet, outer (.375" thick)
B = Solid, 6 rivet, inner (.375" thick)
C = Solid, 6 rivet, thin inner (.250" thick)
F = Solid, 6 rivet, outer (.550" thick)
H = Nested, outer (crank bolt clearance)
J = Nested, inner (crank bolt clearance)
R = Solid, 8 rivet, thin inner (.250" thick)
T = Solid, 8 rivet, inner (.375" thick)
V = Solid, 8 rivet, outer (.375" thick)

Features & Information:

- 3 & 4-plate
- Push-type release
- High strength one-piece lug drive cover
- Open cover design for cleaner and cooler operation
- Hardened steel leg shields
- Individually balanced and marked
- Individually tested for clamp and release load

Typical Applications

- Champ Car
- IRL
- Road Racing
- Oval Track



CLUTCH PART #	SET-UP HEIGHT (NEW)	BOLT GRIP	OVERALL HT
671-023HG	1.20 (30.5)	1.526 (38.76)	1.70 (43.2)
671-024HG	1.48 (37.6)	1.800 (45.72)	1.97 (50.0)

Clutch Assemblies

Includes: Clutch cover with diaphragm spring, pressure plates and floater plate(s)

3-plate

Torque Capacity (lb-ft/Nm)	Release Load* (lb/daN)	Weight** (lbs/kg)	M.O.I.** (lb-in²/kg-m²)	Pressure Plate Ratio	P/N
690/938	800/352	4.8/2.2	17.4/.0051	High	671-023HG

4-plate

Torque Capacity (lb-ft/Nm)	Release Load* (lb/daN)	Weight** (lbs/kg)	M.O.I.** (lb-in2/kg-m2)	Pressure Plate Ratio	P/N
920/1251	800/352	5.9/2.7	21.4/.0063	High	671-024HG

** Values listed are typical for release bearings with a 38mm contact diameter. Larger contact diameters will increase release load.*

*** Weight and M.O.I. includes disc(s)*

Note: Unless noted, clutches listed are for use with "step-type" flywheels that have a .100" step for the friction surface.

Service Parts

- Pressure Plate

Description	Part Number
Pressure plate, 4.5", high ratio	671-118HR

- Floater Plate

Description	Part Number
Floater plate, 4.5"	671-119

Disc Packs

- Full circle discs with 6-rivet hubs

Thickness (new): .104"

Maximum disc pack wear (total of all discs): .020"

Input Shaft Size (# of teeth x diameter)	3-plate	4-plate
20 x 7/8"	64114-9-YYX-25	64114-9-YYYX-25
23 x 1" x 30˚	64114-9-YYX-30	64114-9-YYYX-30
26 x 1 5/32"	64114-9-YYX-36	64114-9-YYYX-36

Features & Information:

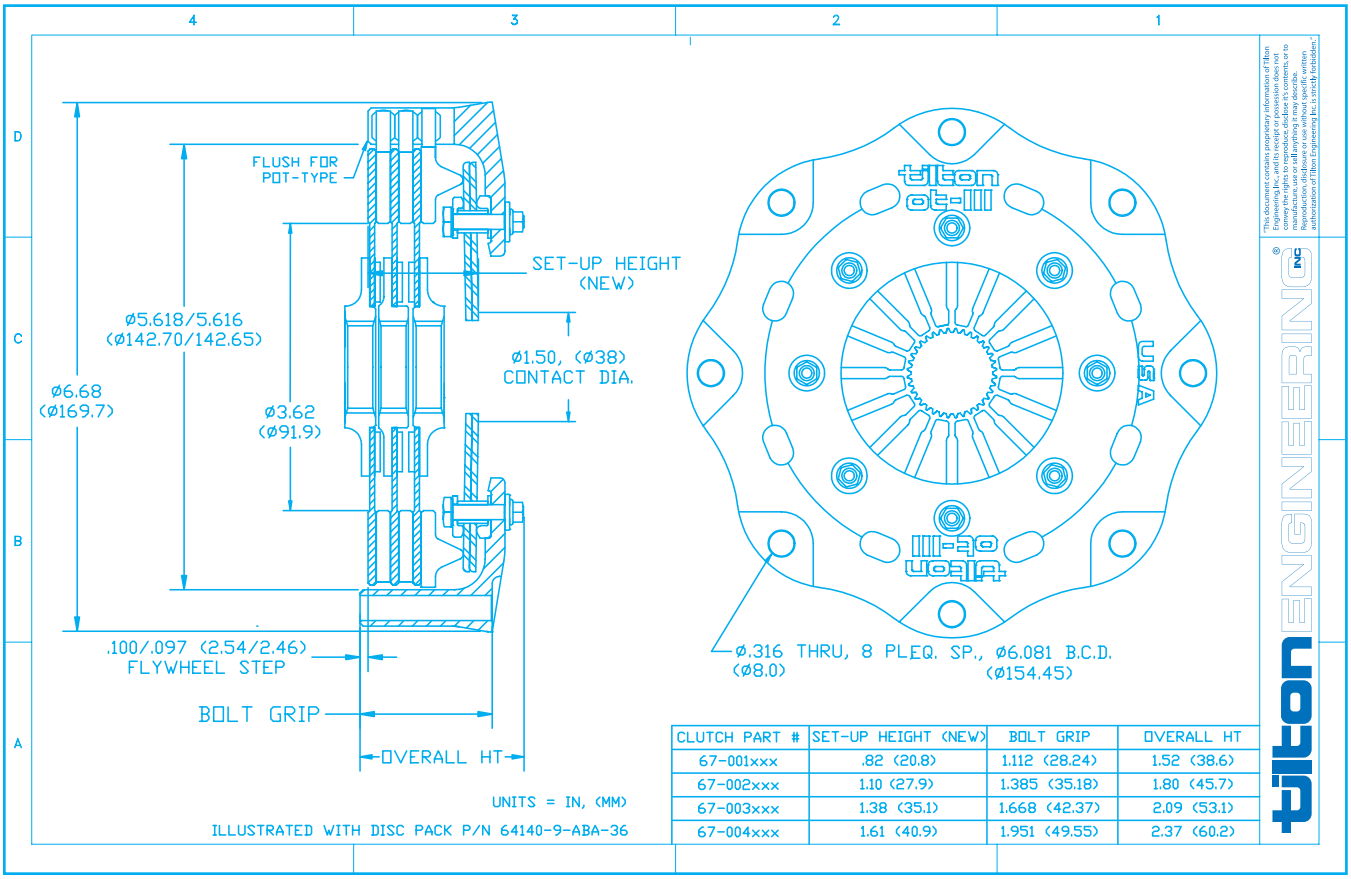
- 1, 2, 3 & 4-plate
- Push-type release
- High strength one-piece lug drive cover
- Open cover design for cleaner and cooler operation
- Hardened steel thrust buttons
- Individually balanced and marked

New Option

- Heavy Duty 5.5" 3 & 4-plate clutches. Clutches feature a high-mass pressure plate that offers increased heat capacity. Ideal for applications using a tall 1st gear, such as Grand Am DP cars.

Typical Applications

- Oval Track
- Road Racing
- Endurance



CLUTCH PART #	SET-UP HEIGHT (NEW)	BOLT GRIP	OVERALL HT
67-001xxx	.82 (20.8)	1.112 (28.24)	1.52 (38.6)
67-002xxx	1.10 (27.9)	1.385 (35.18)	1.80 (45.7)
67-003xxx	1.38 (35.1)	1.668 (42.37)	2.09 (53.1)
67-004xxx	1.61 (40.9)	1.951 (49.55)	2.37 (60.2)

Clutch Assemblies

Includes: Clutch cover with diaphragm spring, pressure plates and floater plate(s)

1-plate

Torque Capacity (lb-ft/Nm)	Release Load* (lb/daN)	Weight** (lbs/kg)	M.O.I.** (lb-in2/kg-m2)	Pressure Plate Ratio	Flywheel Type	P/N
250/340	850/375	4.0/1.8	20.6/.0061	High	Step	67-001HG

2-plate

Torque Capacity lb-ft/Nm)	Release Load* (lb/daN)	Weight** (lbs/kg)	M.O.I.** ($lb\text{-}in^2/kg\text{-}m^2$)	Pressure Plate Ratio	Flywheel Type	P/N
500/680	850/375	5.7/2.6	29.4/.0087	High	Step	67-002HG
500/680	850/375	5.7/2.6	29.4/.0087	High	Pot	67-012HG

3-plate

Torque Capacity (lb-ft/Nm)	Release Load* (lb/daN)	Weight** (lbs/kg)	M.O.I.** ($lb\text{-}in^2/kg\text{-}m^2$)	Pressure Plate Ratio	Flywheel Type	P/N
750/1020	850/375	7.3/3.3	40.1/.0118	High	Step	67-003HG
750/1020	850/375	7.3/3.3	40.1/.0118	High	Pot	67-013HG
750/1020	850/375	7.5/3.4	41.2/.0121	High	Step	67-043HG***

4-plate

Torque Capacity (lb-ft/Nm)	Release Load* (lb/daN)	Weight** (lbs/kg)	M.O.I.** ($lb\text{-}in^2/kg\text{-}m^2$)	Pressure Plate Ratio	Flywheel Type	P/N
1000/1360	850/375	8.9/4.0	47.0/.0138	High	Step	67-004HG
1000/1360	850/375	8.9/4.0	47.0/.0138	High	Pot	67-014HG
1000/1360	850/375	9.1/4.1	48.1/.0141	High	Step	67-044HG***

** Values listed are typical for release bearings with a 38mm contact diameter. Larger contact diameters will increase release load.*

*** Weight and M.O.I. includes disc(s)*

**** Heavy duty model includes high-mass pressure plate*

Service Parts

- Pressure Plate

Description	Part Number
Pressure plate, 5.5", high ratio	67-118HR
Pressure plate, 5.5", high ratio, heavy duty	67-128HR

- Floater Plate

Description	Part Number
Floater plate, 5.5"	67-119

Disc Packs

- Full circle discs with 6-rivet hubs

Thickness (new): .104"

Maximum disc pack wear (total of all discs): .030"

Input Shaft Size (# of teeth x diameter)	1-plate	2-plate	3-plate	4-plate
10 x 7/8"	64140-9-A-03	64140-9-AA-03	64140-9-ABA-03	
10 x 1"	64140-9-F-04	64140-9-AA-04	64140-9-ABA-04	
10 x 1 1/16"	64140-9-F-05	64140-9-AC-05*	64140-9-ACC-05*	
10 x 1 1/4"	64140-9-A-07	64140-9-AA-07	64140-9-ABA-07	
10 x 1 1/8"	64140-9-F-06	64140-9-AA-06	64140-9-ABA-06	
10 x 1 3/8"	64140-9-A-08	64140-9-AA-08	64140-9-ABA-08	
10 x 29mm	64140-9-F-10	64140-9-AA-10	64140-9-ABA-10	
14 x 30.8mm	64140-9-A-14	64140-9-AA-14	64140-9-ABA-14	
17 x 3/4"	64140-9-F-15	64140-9-AA-15	N/A	
18 x 25/32"	64140-9-A-18	64140-9-AA-18	64140-9-ACC-18*	
18 x 21mm	64140-9-F-17	64140-9-AA-17	N/A	
18 x 1 3/16"	64140-9-F-19	64140-9-AA-19	64140-9-ABA-19	
19 X 7/8" X 30˚	64140-9-A-21	64140-9-AA-21	N/A	
19 x 13/16"	64140-9-A-20	64140-9-AA-20	N/A	
20 x 7/8"	64140-9-F-25	64140-9-AA-25	64140-9-ABA-25	
20 x 7/8"	64140-9-F-25	64140-9-AC-25*	64140-9-ACC-25*	64140-9-ACCC-25*
21 x 29/32"	64140-9-F-26	64140-9-AA-26	64140-9-ABA-26	
21 x 29/32"	64140-9-F-26	64140-9-AC-26*	64140-9-ACC-26*	
21 x 24mm	64140-9-F-27	64140-9-AA-27	64140-9-ABA-27	
21 x 29mm	64140-9-A-28	64140-9-AA-28	64140-9-ABA-28	
22 x 15/16"	64140-9-A-42	64140-9-AA-42	N/A	
22 x 1"	64140-9-F-29	64140-9-AA-29	64140-9-ABA-29	
22 x 29.4mm	64140-9-A-51	64140-9-AA-51	64140-9-ABA-51	
23 x 1" x 30˚	64140-9-F-30	64140-9-AA-30	64140-9-ABA-30	
23 x 1" x 30˚	64140-9-F-30	64140-9-AC-30*	64140-9-ACC-30*	64140-9-ACCC-30*
23 x 24mm x 25˚	64140-9-A-41	64140-9-AA-41	64140-9-ABA-41	
23 x 24mm x 25˚	64140-9-A-41	64140-9-AC-41*	64140-9-ACC-41*	
24 x 13/16"	64140-9-F-32	64140-9-AA-32	64140-9-ABA-32	
24 x 13/16"	64140-9-F-32	64140-9-AC-32*	64140-9-ACC-32*	
24 x 1" (L-Series Nissan)	64140-9-A-33	64140-9-A-33	64140-9-ABA-33	
24 x 1" (late-Nissan)	64140-9-A-43	64140-9-AA-43	64140-9-ABA-43	
24 x 1" (late-Nissan)	64140-9-A-43	64140-9-AC-43*	64140-9-ACC-43*	
24 x 26mm	64140-9-A-38	64140-9-AA-38	64140-9-ABA-38	
24 x 26mm	64140-9-A-38	64140-9-AC-38*	64140-9-ACC-38*	
26 x 22mm	64140-9-A-35	64140-9-AC-35*	64140-9-ACC-35*	
26 x 1 5/32"	64140-9-F-36	64140-9-AA-36	64140-9-ABA-36	
26 x 1 5/32"	64140-9-F-36	64140-9-AC-36*	64140-9-ACC-36*	64140-9-ACCC-36*
28 x 7/8"	64140-9-F-39	64140-9-AA-39	64140-9-ABA-39	
28 x 7/8"	64140-9-F-39	64140-9-AC-39*	64140-9-ACC-39*	
29 x 1 1/4"	64140-9-A-46	64140-9-AA-46	64140-9-ABA-46	64140-9-ACCC-46*

Disc Packs Continued

- Paddle type discs with 6-rivet hubs

Thickness (new): .104"

Maximum disc pack wear (total of all discs): .030"

Input Shaft Size (# of teeth x diameter)	1-plate	2-plate	3-plate	4-plate
10 x 29mm	64140-3-F-10	64140-3-AA-10	64140-3-ABA-10	
20 x 7/8"	64140-3-F-25	64140-3-AA-25	64140-3-ABA-25	
20 x 7/8"	64140-3-F-25	64140-3-AC-25*	64140-3-ACC-25*	
23 x 1" x 30˚	64140-3-F-30	64140-3-AA-30	64140-3-ABA-30	
23 x 1" x 30˚	64140-3-F-30	64140-3-AA-30*	64140-3-ACC-30*	64140-3-ACCC-30*
26 x 1 5/32"	64140-3-F-36	64140-3-AA-36	64140-3-ABA-36	
26 x 1 5/32"	64140-3-F-36	64140-3-AC-36*	64140-3-ACC-36*	64140-3-ACCC-36*
29 x 1 1/4"	64140-3-A-46	64140-3-AA-46	64140-3-ABA-46	

Note: Unless noted, all disc packs included "back-to-back" hubs. Contact Tilton Engineering if your application is not listed.

** Disc packs include "stacked" hubs.*

Photo courtesy of RealTime Racing

Customer Profile

Car: Acura TSX A-Spec

Team: RealTime Racing

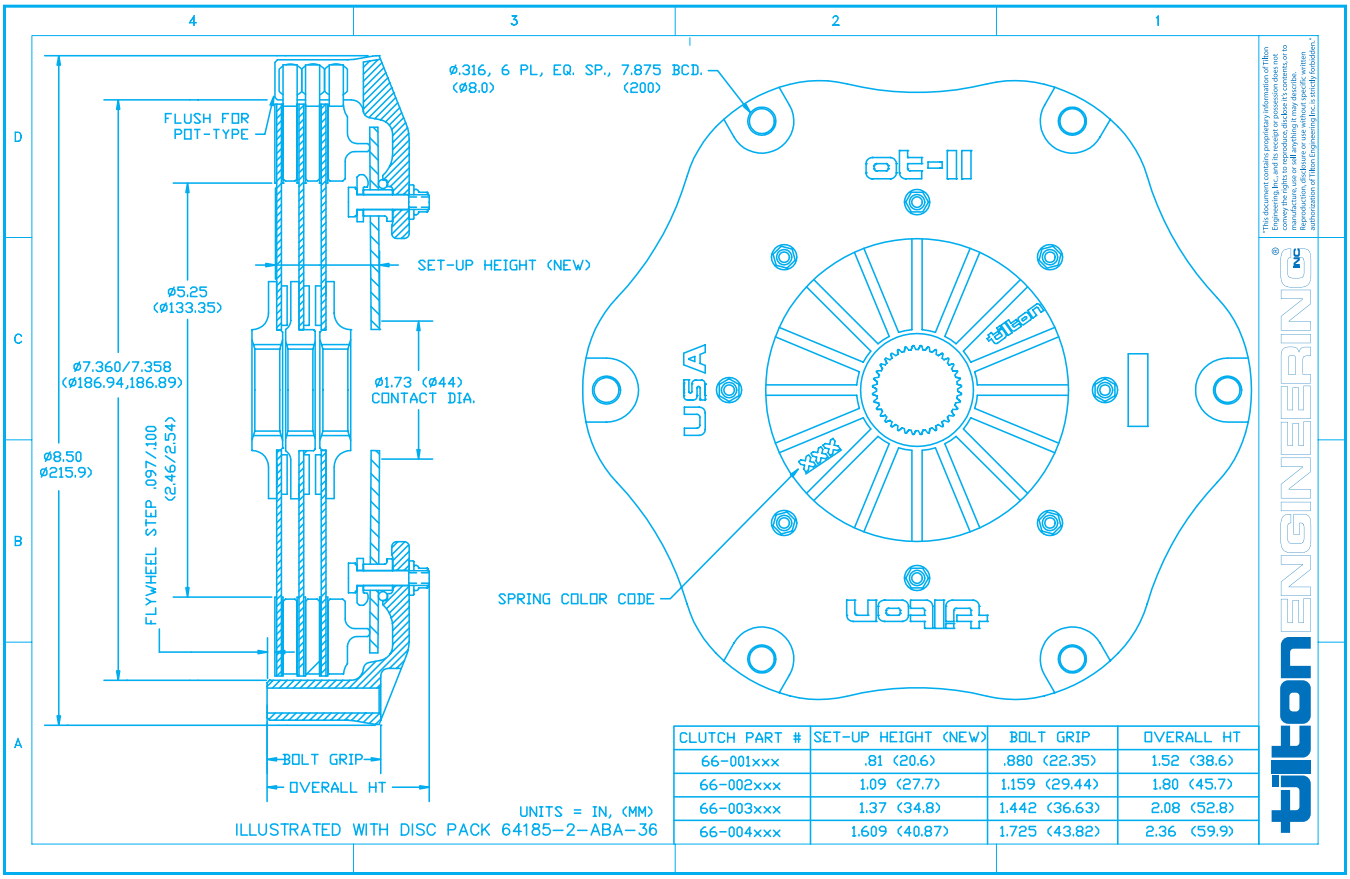
Series: SCCA World Challenge (Touring)

Features & Information:

- 1,2,3 & 4-plate
- Push-type release bearing
- High strength one-piece lug drive cover
- Open cover design for clean and cool operation
- Hardened steel thrust buttons
- Individually balanced and marked

Typical Applications

- Oval Track
- Road Racing
- Endurance
- Off-Road



CLUTCH PART #	SET-UP HEIGHT (NEW)	BOLT GRIP	OVERALL HT
66-001xxx	.81 (20.6)	.880 (22.35)	1.52 (38.6)
66-002xxx	1.09 (27.7)	1.159 (29.44)	1.80 (45.7)
66-003xxx	1.37 (34.8)	1.442 (36.63)	2.08 (52.8)
66-004xxx	1.609 (40.87)	1.725 (43.82)	2.36 (59.9)

Clutch Assemblies

Includes: Clutch cover with diaphragm spring, pressure plates and floater plate(s)

1-plate

Torque Capacity (lb-ft/Nm)	Release Load* (lb/daN)	Weight** (lbs/kg)	M.O.I.** (lb-in²/kg-m²)	Pressure Plate Ratio	P/N
150/204	420/185	5.1/2.3	44.1/.0130	High	66-001HGN
180/245	420/185	5.1/2.3	44.1/.0130	Ultra-high	66-001UGN
200/272	520/229	5.1/2.3	44.1/.0130	High	66-001HBF
240/326	520/229	5.1/2.3	44.1/.0130	Ultra-high	66-001UBF
250/340	560/247	5.1/2.3	44.1/.0130	High	66-001HORA
300/408	560/247	5.1/2.3	44.1/.0130	Ultra-high	66-001UORA
310/422	620/273	5.1/2.3	44.1/.0130	High	66-001HG
370/503	620/273	5.1/2.3	44.1/.0130	Ultra-high	66-001UG
350/476	690/304	5.1/2.3	44.1/.0130	High	66-001HGG
420/571	690/304	5.1/2.3	44.1/.0130	Ultra-high	66-001UGG

2-plate

Torque Capacity (lb-ft/Nm)	Release Load* (lb/daN)	Weight** (lbs/kg)	M.O.I.** (lb-in²/kg-m²)	Pressure Plate Ratio	P/N
300/408	420/185	7.5/3.4	66.3/.0195	High	66-002HGN
360/490	420/185	7.5/3.4	66.3/.0195	Ultra-high	66-002UGN
400/544	520/229	7.5/3.4	66.3/.0195	High	66-002HBF
480/652	520/229	7.5/3.4	66.3/.0195	Ultra-high	66-002UBF
500/680	560/247	7.5/3.4	66.3/.0195	High	66-002HORA
600/816	560/247	7.5/3.4	66.3/.0195	Ultra-high	66-002UORA
620/844	620/273	7.5/3.4	66.3/.0195	High	66-002HG
740/1006	620/273	7.5/3.4	66.3/.0195	Ultra-high	66-002UG
700/952	690/304	7.5/3.4	66.3/.0195	High	66-002HGG
840/1142	690/304	7.5/3.4	66.3/.0195	Ultra-high	66-002UGG
Lightweight (circle track use only)					
840/1142	690/304	7.2/3.2	62.3/.0183	Ultra-high	66-202UGG

3-plate

Torque Capacity (lb-ft/Nm)	Release Load* (lb/daN)	Weight** (lbs/kg)	M.O.I.** (lb-in²/kg-m²)	Pressure Plate Ratio	P/N
450/612	420/185	9.9/4.5	87.6/.0258	High	66-003HGN
540/734	420/185	9.9/4.5	87.6/.0258	Ultra-high	66-003UGN
600/816	520/229	9.9/4.5	87.6/.0258	High	66-003HBF
720/978	520/229	9.9/4.5	87.6/.0258	Ultra-high	66-003UBF
750/1020	560/247	9.9/4.5	87.6/.0258	High	66-003HORA
900/1224	560/247	9.9/4.5	87.6/.0258	Ultra-high	66-003UORA
930/1266	620/273	9.9/4.5	87.6/.0258	High	66-003HG
1110/1509	620/273	9.9/4.5	87.6/.0258	Ultra-high	66-003UG
1050/1428	690/304	9.9/4.5	87.6/.0258	High	66-003HGG
1260/1713	690/304	9.9/4.5	87.6/.0258	Ultra-high	66-003UGG
Lightweight (circle track use only)					
930/1266	620/273	9.3/4.2	83.2/.0245	High	66-203HG

** Values listed are typical for release bearings with a 44mm contact diameter. Larger contact diameters will increase release load.*

*** Weight and M.O.I. includes disc(s)*

Note: Unless noted, clutches listed are for use with "step-type" flywheels that have a .100" step for the friction surface. Clutches are also available for "pot-type" (no step) flywheels. Contact Tilton Engineering for further information.

Continued »

Service Parts

- Pressure Plate

Description	Part Number
Pressure plate, 7.25", high ratio	66-118HR
Pressure plate, 7.25", ultra-high ratio	66-118UHR
Pressure plate, 7.25", high ratio, lightweight	66-128HR
Pressure plate, 7.25", ultra-high ratio , lightweight	66-128UHR

- Floater Plate

Description	Part Number
Floater plate, 7.25"	66-119
Floater plate, 7.25", lightweight	66-129

Disc Packs

- Full circle discs with 8-rivet hubs

Thickness (new): .104"

Maximum disc pack wear (total of all discs): .030"

Input Shaft Size (# of teeth x diameter)	1-plate	2-plate	3-plate
10 x 29mm	64185-4-V-10	64185-4-VV-10	64185-4-VTV-10
23 x 1" x 30˚	64185-4-V-30	64185-4-VV-30	64185-4-VTV-30
23 x 1" x 30˚	64185-4-V-30	64185-4-VR-30*	64185-4-VRR-30*
26 x 1 5/32"	64185-4-V-36	64185-4-VV-36	64185-4-VTV-36
29 x 1 1/4"	64185-4-V-46	64185-4-VV-46	64185-4-VTV-46

- Paddle type discs with 8-rivet hubs

Thickness (new): .104"

Maximum disc pack wear (total of all discs): .030"

Input Shaft Size (# of teeth x diameter)	1-plate	2-plate	3-plate
10 x 29mm	64185-3-V-10	64185-3-VV-10	64185-3-VTV-10
20 x 7/8"	64185-3-V-25	64185-3-VV-25	64185-3-VTV-25
23 x 1" x 30˚	64185-3-V-30	64185-3-VV-30	64185-3-VTV-30
23 x 1" x 30˚	64185-3-V-30	64185-3-VR-30*	64185-3-VRR-30*
26 x 1 5/32"	64185-3-V-36	64185-3-VV-36	64185-3-VTV-36
29 x 1 1/4"	64185-3-V-46	64185-3-VV-46	64185-3-VTV-46

Disc Packs Continued

- Full circle discs with 6-rivet hubs

Thickness (new): .104"

Maximum disc pack wear (total of all discs): .030"

Input Shaft Size (# of teeth x diameter)	1-plate	2-plate	3-plate
10 x 7/8"	64185-2-A-03	64185-2-AA-03	64185-2-ABA-03
10 x 1"	64185-2-F-04	64185-2-AA-04	64185-2-ABA-04
10 x 1 1/16"	64185-2-F-05	64185-2-AC-05*	64185-2-ACC-05*
10 x 1 1/4"	64185-2-A-07	64185-2-AA-07	64185-2-ABA-07
10 x 1 1/8"	64185-2-F-06	64185-2-AA-06	64185-2-ABA-06
10 x 1 3/8"	64185-2-A-08	64185-2AA-08	64185-2-ABA-08
10 x 29mm	64185-2-F-10	64185-2-AA-10	64185-2-ABA-10
14 x 30.8mm	64185-2-A-14	64185-2-AA-14	64185-2-ABA-14
17 x 3/4"	64185-2-F-15	64185-2-AA-15	N/A
18 x 25/32"	64185-2-A-18	64185-2-AA-18	64185-2-ACC-18*
18 x 21mm	64185-2-F-17	64185-2-AA-17	N/A
18 x 1 3/16"	64185-2-F-19	64185-2-AA-19	64185-2-ABA-19
19 X 7/8" X 30˚	64185-2-A-21	64185-2-AA-21	N/A
19 x 13/16"	64185-2-A-20	64185-2-AA-20	N/A
20 x 7/8"	64185-2-F-25	64185-2-AA-25	64185-2-ABA-25
20 x 7/8"	64185-2-F-25	64185-2-AC-25*	64185-2-ACC-25*
21 x 29/32"	64185-2-F-26	64185-2-AA-26	64185-2-ABA-26
21 x 29/32"	64185-2-F-26	64185-2-AC-26*	64185-2-ACC-26*
21 x 24mm	64185-2-F-27	64185-2-AA-27	64185-2-ABA-27
21 x 29mm	64185-2-A-28	64185-2-AA-28	64185-2-ABA-28
22 x 15/16"	64185-2-A-42	64185-2-AA-42	N/A
22 x 1"	64185-2-F-29	64185-2-AA-29	64185-2-ABA-29
22 x 29.4mm	64185-2-A-51	64185-2-AA-51	64185-2-ABA-51
23 x 1" x 30˚	64185-2-F-30	64185-2-AA-30	64185-2-ABA-30
23 x 1" x 30˚	64185-2-F-30	64185-2-AC-30*	64185-2-ACC-30*
23 x 24mm x 25˚	64185-2-A-41	64185-2-AA-41	64185-2-ABA-41
23 x 24mm x 25˚	64185-2-A-41	64185-2-AC-41*	64185-2-ACC-41*
24 x 13/16"	64185-2-F-32	64185-2-AA-32	64185-2-ABA-32
24 x 13/16"	64185-2-F-32	64185-2-AC-32*	64185-2-ACC-32*
24 x 1" (L-Series Nissan)	64185-2-A-33	64185-2-2-AA-33	64185-2-ABA-33
24 x 1" (late-Nissan)	64185-2-A-43	64185-2-AA-43	64185-2-ABA-43
24 x 1" (late-Nissan)	64185-2-A-43	64185-2-AC-43*	64185-2-ACC-43*
24 x 26mm	64185-2-A-38	64185-2-AA-38	64185-2-ABA-38
24 x 26mm	64185-2-A-38	64185-2-AC-38*	64185-2-ACC-38*
26 x 22mm	64185-2-A-35	64185-2-AC-35*	64185-2-ACC-35*
26 x 1 5/32"	64185-2-F-36	64185-2-AA-36	64185-2-ABA-36
26 x 1 5/32"	64185-2-F-36	64185-2-AC-36*	64185-2-ACC-36*
28 x 7/8"	64185-2-F-39	64185-2-AA-39	64185-2-ABA-39
28 x 7/8"	64185-2-F-39	64185-2-AC-39*	64185-2-ACC-39*
29 x 1 1/4"	64185-2-A-46	64185-2-AA-46	64185-2-ABA-46

Note: Unless noted, all disc packs included "back-to-back" hubs. Contact Tilton Engineering if your application is not listed.

** Disc packs include "stacked" hubs.*

CERAMETALLIC CLUTCHES

Cerametallic

Tilton OT-Series cerametallic clutches are primarily designed for racing applications that require some clutch slippage (modulation). OT-Series cerametallic clutch feature 6-puck discs that utilize a unique blend of ceramic and metallic materials. Because the cerametallic discs are thicker than sintered metallic discs, they have a higher heat capacity through their increased mass. In addition, the engagement characteristics of cerametallic clutches are smoother than sintered metallic clutches. These features have made cerametallic clutches popular in applications such as rally, hill climb, club racing and street/strip applications.

5.5" Cerametallic - pg.15

Hybrid

Tilton OT-Series hybrid clutches are primarily designed for high performance applications that require high torque capacity and "smoother" engagement characteristics. OT-Series hybrid clutches feature a durable 6-puck cerametallic disc and smooth engaging organic disc within one assembly. The result is a clutch assembly that offers better drivability than 2-plate cerametallic clutches, but still provides a high torque capacity. The 7.25" diameter discs provide a lower inertia than OE-type clutches, allowing more horsepower to the wheels and quicker shifting. These features have made OT-Series suitable for high-performance street and autocross applications.

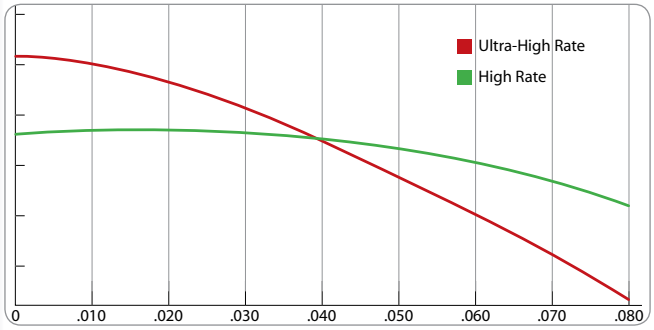
7.25" Cerametallic - pg.17

7.25" Hybrid - pg.20

8.5" Cerametallic - pg.21

OT-Series Clutch Clamp Load Curves

As standard, OT-Series clutches feature a High ratio pressure plate that provides high clamp load over a wide wear range. As illustrated in the graphs below, the clamp load (torque capacity) of the High ratio pressure plate is relatively flat until .030" (.76mm) of wear. As on option, 7.25" clutches are also available with an Ultra-High ratio pressure plate. Ultra-High ratio pressure plates provide 20% more clamp load and diaphragm spring travel (modulation) than High ratio.



High Ratio Pressure Plate

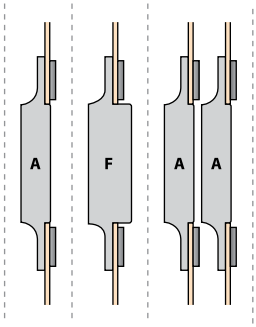
- Standard pressure plate ratio for 5.5"/7.25"/8.5" clutches
- Short release travel for quick engagement and shifting
- Flat clamp load curve

Ultra-High Ratio Pressure Plate

- Optional pressure plate ratio for 7.25" clutches
- 20% more release travel than High ratio for improved modulation
- 20% more clamp load than High ratio for higher peak torque capacity
- Steeper clamp load curve than High ratio

Hub Types

CLUTCH COVER (TOP)



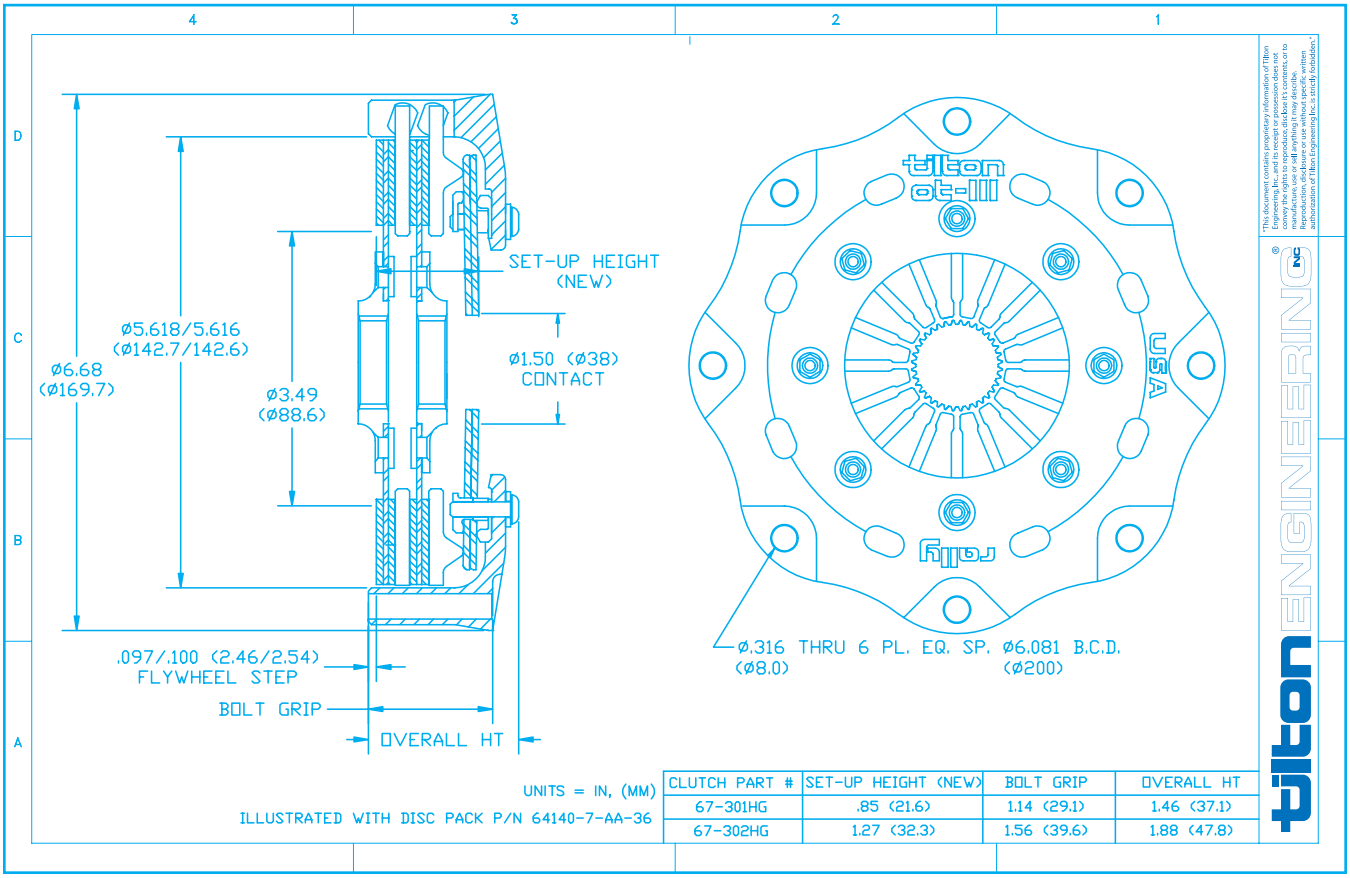
A = Solid, 6 rivet, outer (.375" thick)
F = Solid, 6 rivet, outer (.550" thick)

Features & Information:

- 1 & 2-plate
- Push-type release
- High strength one-piece lug drive cover
- Open cover design for cleaner and cooler operation
- Hardened steel thrust buttons
- Individually balanced and marked

Typical Applications

- Rally
- Club Racing
- Road Racing



UNITS = IN. (MM)

ILLUSTRATED WITH DISC PACK P/N 64140-7-AA-36

CLUTCH PART #	SET-UP HEIGHT (NEW)	BOLT GRIP	OVERALL HT
67-301HG	.85 (21.6)	1.14 (29.1)	1.46 (37.1)
67-302HG	1.27 (32.3)	1.56 (39.6)	1.88 (47.8)

Clutch Assemblies

Includes: Clutch cover with diaphragm spring, pressure plates and floater plate(s)

1-plate

Torque Capacity (lb-ft/Nm)	Release Load* (lb/daN)	Weight** (lbs/kg)	M.O.I.** (lb-in²/kg-m²)	Pressure Plate Ratio	P/N
250/340	850/375	4.0/1.8	21.4/.0063	High	67-301HG

2-plate

Torque Capacity (lb-ft/Nm)	Release Load* (lb/daN)	Weight** (lbs/kg)	M.O.I.** (lb-in²/kg-m²)	Pressure Plate Ratio	P/N
500/680	850/375	6.1/2.7	32.2/.0095	High	67-302HG

** Values listed are typical for release bearings with a 38mm contact diameter. Larger contact diameters will increase release load.*

*** Weight and M.O.I. includes disc(s)*

Note: Unless noted, clutches listed are for use with "step-type" flywheels that have a .100" step for the friction surface. Clutches are also available for "pot-type" (no step) flywheels. Contact Tilton Engineering for further information.

Service Parts

- Pressure Plate

Description	Part Number
Pressure plate, 5.5", high ratio	67-118HR-R

- Floater Plate

Description	Part Number
Floater plate, 5.5"	67-119R

Disc Packs

- 5-paddle discs with 6-rivet hubs

Thickness (new): .236"

Maximum disc pack wear (total of all discs): .030"

Input Shaft Size (# of teeth x diameter)	1-plate	2-plate
10 x 7/8"	64140-7-A-03	64140-7-AA-03
10 x 1"	64140-7-F-04	64140-7-AA-04
10 x 1 1/16"	64140-7-F-05	64140-7-AA-05
10 x 1 1/4"	64140-7-A-07	64140-7-AA-07
10 x 1 1/8"	64140-7-F-06	64140-7-AA-06
10 x 1 3/8"	64140-7-A-08	64140-7-AA-08
10 x 29mm	64140-7-F-10	64140-7-AA-10
14 x 30.8mm	64140-7-A-14	64140-7-AA-14
17 x 3/4"	64140-7-F-15	64140-7-AA-15
18 x 25/32"	64140-7-A-18	64140-7-AA-18
18 x 21mm	64140-7-F-17	64140-7-AA-17
18 x 1 3/16"	64140-7-F-19	64140-7-AA-19
19 X 7/8" X 30˚	64140-7-A-21	64140-7-AA-21
19 x 13/16"	64140-7-A-20	64140-7-AA-20
20 x 7/8"	64140-7-F-25	64140-7-AA-25
21 x 29/32"	64140-7-F-26	64140-7-AA-26

Cont'd

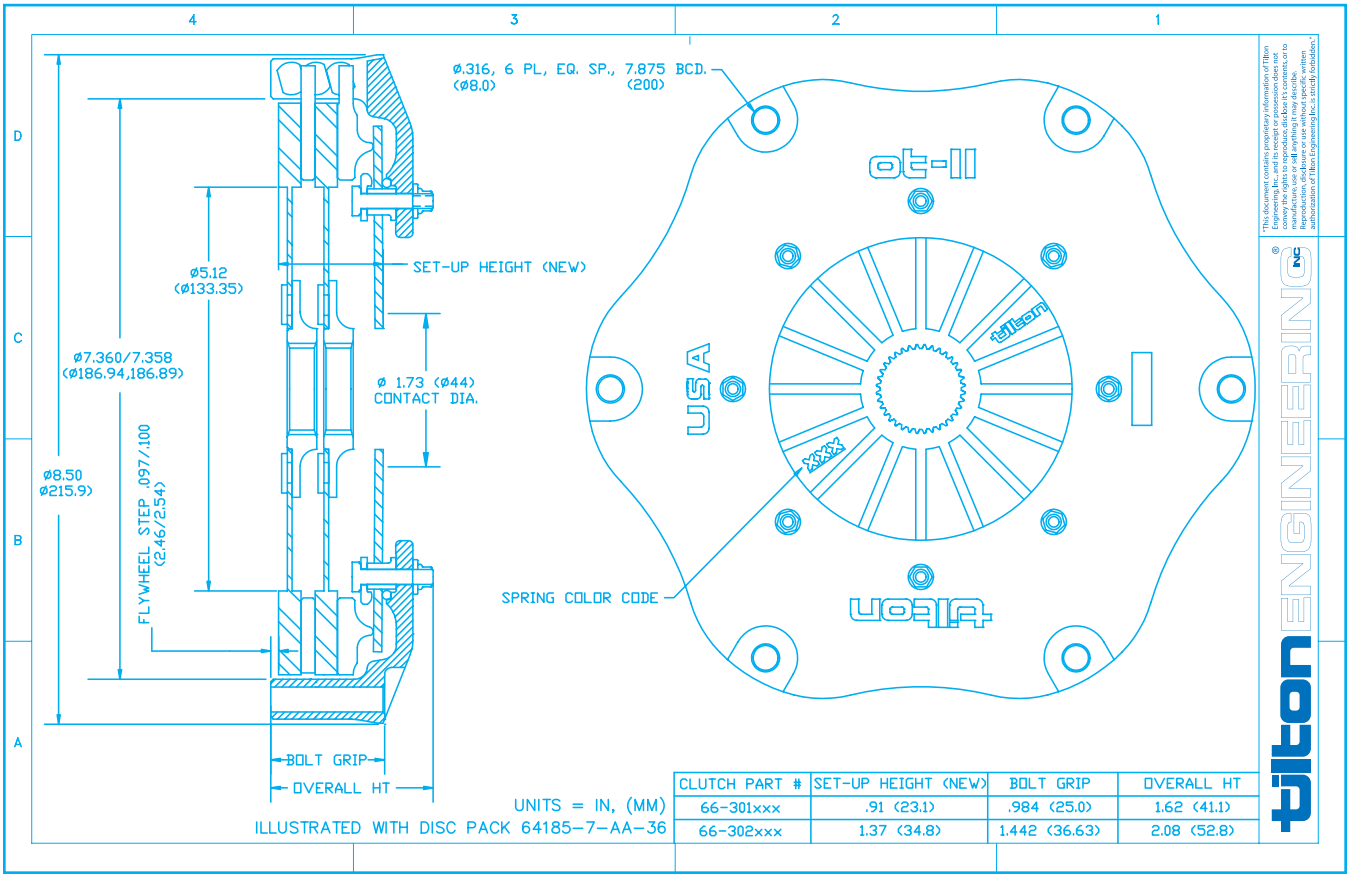
(# of teeth x diameter)	1-plate	2-plate
21 x 24mm	64140-7-F-27	64140-7-AA-27
21 x 29mm	64140-7-A-28	64140-7-AA-28
22 x 15/16"	64140-7-A-42	64140-7-AA-42
22 x 1"	64140-7-F-29	64140-7-AA-29
23 x 1" x 30˚	64140-7-F-30	64140-7-AA-30
23 x 24mm x 25˚	64140-7-A-41	64140-7-AA-41
24 x 13/16"	64140-7-F-32	64140-7-AA-32
24 x 1" (L-Series Nissan)	64140-7-A-33	64140-7-AA-33
24 x 1" (late-Nissan)	64140-7-A-43	64140-7-AA-43
24 x 26mm	64140-7-A-38	64140-7-AA-38
26 x 22mm	64140-7-A-35	64140-7-AA-35
26 x 1 5/32"	64140-7-F-36	64140-7-AA-36
28 x 7/8"	64140-7-F-39	64140-7-AA-39
28 x 7/8"	64140-7-F-39	64140-7-AA-39
29 x 1 1/4"	64140-7-A-46	64140-7-AA-46

Features & Information:

- 1 & 2-plate
- Push-type release
- High strength one-piece lug drive cover
- Open cover design for cleaner and cooler operation
- Hardened steel thrust buttons
- Individually balanced and marked

Typical Applications

- Rally
- Club Racing
- Road Racing
- Off-Road
- Street/Strip



CLUTCH PART #	SET-UP HEIGHT (NEW)	BOLT GRIP	OVERALL HT
66-301xxx	.91 (23.1)	.984 (25.0)	1.62 (41.1)
66-302xxx	1.37 (34.8)	1.442 (36.63)	2.08 (52.8)

Clutch Assemblies

Includes: Clutch cover with diaphragm spring, pressure plates and floater plate(s)

1-plate

Torque Capacity (lb-ft/Nm)	Release Load* (lb/daN)	Weight** (lbs/kg)	M.O.I.** (lb-in²/kg-m²)	Pressure Plate Ratio	P/N
150/204	420/185	5.6/2.5	52.4/.0154	High	66-301HGN
180/245	420/185	5.6/2.5	52.4/.0154	Ultra-high	66-301UGN
200/272	520/229	5.6/2.5	52.4/.0154	High	66-301HBF
240/326	520/229	5.6/2.5	52.4/.0154	Ultra-high	66-301UBF
250/340	560/247	5.6/2.5	52.4/.0154	High	66-301HORA
300/408	560/247	5.6/2.5	52.4/.0154	Ultra-high	66-301UORA
310/422	620/273	5.6/2.5	52.4/.0154	High	66-301HG
370/503	620/273	5.6/2.5	52.4/.0154	Ultra-high	66-301UG
350/476	690/304	5.6/2.5	52.4/.0154	High	66-301HGG
420/571	690/304	5.6/2.5	52.4/.0154	Ultra-high	66-301UGG

2-plate

Torque Capacity (lb-ft/Nm)	Release Load* (lb/daN)	Weight** (lbs/kg)	M.O.I.** (lb-in2/kg-m2)	Pressure Plate Ratio	P/N
300/408	420/185	8.2/3.7	76.3/.0225	High	66-302HGN
360/490	420/185	8.2/3.7	76.3/.0225	Ultra-high	66-302UGN
400/544	520/229	8.2/3.7	76.3/.0225	High	66-302HBF
480/652	520/229	8.2/3.7	76.3/.0225	Ultra-high	66-302UBF
500/680	560/247	8.2/3.7	76.3/.0225	High	66-302HORA
600/816	560/247	8.2/3.7	76.3/.0225	Ultra-high	66-302UORA
620/844	620/273	8.2/3.7	76.3/.0225	High	66-302HG
740/1006	620/273	8.2/3.7	76.3/.0225	Ultra-high	66-302UG
700/952	690/304	8.2/3.7	76.3/.0225	High	66-302HGG
840/1142	690/304	8.2/3.7	76.3/.0225	Ultra-high	66-302UGG

** Values listed are typical for release bearings with a 44mm contact diameter. Larger contact diameters will increase release load.*

*** Weight and M.O.I. includes disc(s)*

Note: Unless noted, clutches listed are for use with "step-type" flywheels that have a .100" step for the friction surface. Clutches are also available for "pot-type" (no step) flywheels. Contact Tilton Engineering for further information.

Continued »

Photo courtesy of Can-Jam Racing

Customer Profile

Car: Subaru WRX STI

Team: Can-Jam Racing

Series: Canadian Touring Car Championship

Service Parts

- Pressure Plate

Description	Part Number
Pressure plate, 7.25", high ratio	66-118HR-R
Pressure plate, 7.25", ultra-high ratio	66-118UHR-R

- Floater Plate

Description	Part Number
Floater plate, 7.25"	66-119

Disc Packs

- 6-paddle discs with 6-rivet hubs

Thickness (new): .283"

Maximum disc pack wear (total of all discs): .030"

Input Shaft Size (# of teeth x diameter)	1-plate	2-plate
10 x 7/8"	64185-7-A-03	64185-7-AA-03
10 x 1"	64185-7-F-04	64185-7-AA-04
10 x 1 1/16"	64185-7-F-05	64185-7-AA-05
10 x 1 1/4"	64185-7-A-07	64185-7-AA-07
10 x 1 1/8"	64185-7-F-06	64185-7-AA-06
10 x 1 3/8"	64185-7-A-08	64185-7-AA-08
10 x 29mm	64185-7-F-10	64185-7-AA-10
14 x 30.8mm	64185-7-A-14	64185-7-AA-14
17 x 3/4"	64185-7-F-15	64185-7-AA-15
18 x 25/32"	64185-7-A-18	64185-7-AA-18
18 x 21mm	64185-7-F-17	64185-7-AA-17
18 x 1 3/16"	64185-7-F-19	64185-7-AA-19
19 X 7/8" X 30˚	64185-7-A-21	64185-7-AA-21
19 x 13/16"	64185-7-A-20	64185-7-AA-20
20 x 7/8"	64185-7-F-25	64185-7-AA-25
21 x 29/32"	64185-7-F-26	64185-7-AA-26
21 x 24mm	64185-7-F-27	64185-7-AA-27
21 x 29mm	64185-7-A-28	64185-7-AA-28
22 x 15/16"	64185-7-A-42	64185-7-AA-42
22 x 1"	64185-7-F-29	64185-7-AA-29
23 x 1" x 30˚	64185-7-F-30	64185-7-AA-30
23 x 24mm x 25˚	64185-7-A-41	64185-7-AA-41
24 x 13/16"	64185-7-F-32	64185-7-AA-32
24 x 15/16"	64185-7-A-47	64185-7-AA-47
24 x 1" (L-Series Nissan)	64185-7-A-33	64185-7-AA-33
24 x 1" (late-Nissan)	64185-7-A-43	64185-7-AA-43
24 x 26mm	64185-7-A-38	64185-7-AA-38
26 x 22mm	64185-7-A-35	64185-7-AC-35
26 x 1 5/32"	64185-7-F-36	64185-7-AA-36
26 28 x 7/8"	64185-7-F-39	64185-7-AA-39
28 x 7/8"	64185-7-F-39	64185-7-AA-39
29 x 1 1/4"	64185-7-A-46	64185-7-AA-46

Features & Information:

- 2-plate (1 organic & 1 cerametallic disc)
- Push-type release
- High strength one-piece lug drive cover
- Open cover design for cleaner and cooler operation
- Hardened steel thrust buttons
- Individually balanced and marked

Typical Applications

- High Performance Street
- Autocross

Clutch Assemblies

Includes: Clutch cover with diaphragm spring, pressure plates and floater plate(s)

2-plate

Torque Capacity (lb-ft/Nm)	Release Load* (lb/daN)	Weight** (lbs/kg)	M.O.I.** (lb-in²/kg-m²)	Pressure Plate Ratio	P/N
500/680	560/247	8.2/3.7	76.3/.0225	High	66-602HORA
620/844	620/273	8.2/3.7	76.3/.0225	High	66-602HG

** Values listed are typical for release bearings with a 44mm contact diameter. Larger contact diameters will increase release load.*

*** Weight and M.O.I. includes disc(s)*

Note: Unless noted, clutches listed are for use with "step-type" flywheels that have a .100" step for the friction surface. Clutches are also available for "pot-type" (no step) flywheels. Contact Tilton Engineering for further information.

Service Parts

- Pressure Plate

Description	Part Number
Pressure plate, 7.25", high-ratio	66-133H

- Floater Plate

Description	Part Number
Floater plate, 7.25"	66-119

Disc Packs

- Cerametallic and organic disc sold separately

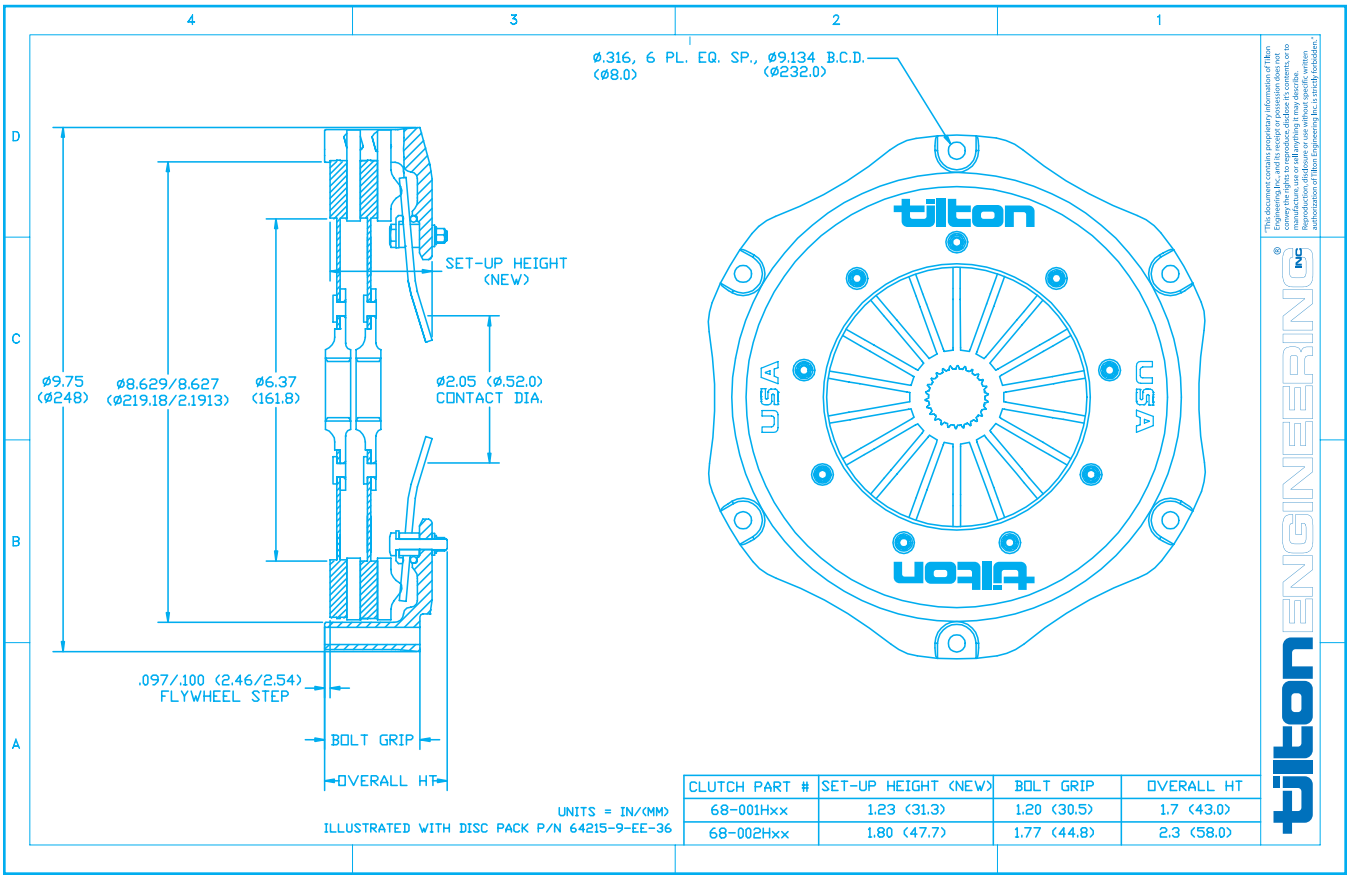
Input Shaft Size (# of teeth x diameter)	Cerametallic Disc	Organic Disc
20 x 7/8"	64185-7-A-25	64185-5-0025
23 x 1" x 30˚	64185-7-A-30H	64185-5-0030
24 x 15/16"	64185-7-A-47	64185-5-0047
24 x 1" (late-Nissan)	64185-7-A-43	64185-5-0043
24 x 26mm	64185-7-A-38	64185-5-0038

Features & Information:

- 1 & 2-plate
- Push-type release
- High strength one-piece lug drive cover
- Open cover design for cleaner and cooler operation
- Hardened steel thrust buttons
- Individually balanced and marked

Typical Applications

- Rally
- Club Racing
- Road Racing
- Off-Road
- Street/Strip



CLUTCH PART #	SET-UP HEIGHT (NEW)	BOLT GRIP	OVERALL HT
68-001Hxx	1.23 (31.3)	1.20 (30.5)	1.7 (43.0)
68-002Hxx	1.80 (47.7)	1.77 (44.8)	2.3 (58.0)

UNITS = IN/(MM)
ILLUSTRATED WITH DISC PACK P/N 64215-9-EE-36

Clutch Assemblies

Includes: Clutch cover with diaphragm spring, pressure plates and floater plate(s)

1-plate

Torque Capacity (lb-ft/Nm)	Release Load* (lb/daN)	Weight** (lbs/kg)	M.O.I.** (lb-in²/kg-m²)	Pressure Plate Ratio	P/N
250/340	470/207	8.1/3.7	99/.029	High	68-001HORA
375/510	580/258	8.1/3.7	99/.029	High	68-001HGG

2-plate

Torque Capacity (lb-ft/Nm)	Release Load* (lb/daN)	Weight** (lbs/kg)	M.O.I.** (lb-in²/kg-m²)	Pressure Plate Ratio	P/N
500/680	470/207	12.3/5.6	158/.046	High	68-002HORA
750/1020	580/258	12.3/5.6	158/.046	High	68-002HGG

** Values listed are for release bearings with a 52mm contact diameter. Larger contact diameters will increase release load.*

*** Weight and M.O.I. includes disc(s)*

Note: Unless noted, clutches listed are for use with "step-type" flywheels that have a .100" step for the friction surface.

Service Parts

- Pressure Plate

Description	Part Number
Pressure plate, 8.5", high-ratio, ORA springs clutches	66-128HR
Pressure plate, 8.5", high-ratio, GG springs clutches	66-118HR

- Floater Plate

Description	Part Number
Floater plate, 8.5"	68-119

Disc Packs

- 6-paddle discs with 8-rivet hubs

Thickness (new): .314"

Maximum disc pack wear (total of all discs): .030"

Input Shaft Size (# of teeth x diameter)	1-plate	2-plate
10 x 1"	64215-9-E-04	64215-9-EE-04
10 x 1 1/16"	64215-9-E-05	64215-9-EE-05
10 x 1 1/8"	64215-9-E-06	64215-9-EE-06
10 x 1 1/4"	64215-9-E-07	64215-9-EE-07
10 x 1 3/8"	64215-9-E-08	64215-9-EE-08
10 x 29mm	64215-9-E-10	64215-9-EE-10
20 x 7/8"	64215-9-E-25	64215-9-EE-25
21 x 29/32"	64215-9-E-26	64215-9-EE-26
21 x 24mm	64215-9-E-27	64215-9-EE-27
21 x 29mm	64215-9-E-28	64215-9-EE-28

Cont'd

(# of teeth x diameter)	1-plate	2-plate
22 x 1"	64215-9-E-29	64215-9-EE-29
23 x 1" x 30°	64215-9-E-30	64215-9-EE-30
24 x 13/16"	64215-9-E-32	64215-9-EE-32
24 x 15/16"	64215-9-E-47	64215-9-EE-47
24 x 1" (L-Series Nissan)	64215-9-E-33	64215-9-EE-33
24 x 1" (late-Nissan)	64215-9-E-43	64215-9-EE-43
24 x 26mm	64215-9-Q-38	64215-9-EE-38
26 x 1 5/32"	64215-9-E-36	64215-9-EE-36

CARBON CLUTCHES

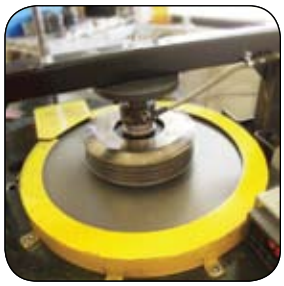
Tilton Engineering developed the first carbon racing clutch, and received a patent on it's drive system, in the mid-80's. It was the first carbon clutch ever to win a Formula One race (*Ayrton Senna's Lotus-Honda at the 1987 US Grand Prix in Detroit*). Since then, Tilton OT-Series carbon clutches have been continually refined to be the best carbon clutches on the market. They have won numerous races worldwide, from the 24 Hours of Le Mans to the Baja 1000.

Utilizing the experience Tilton has gained over the last 20-plus years, OT-Series carbon clutches have evolved to be second to none in quality. Each is built using the finest materials, the latest in manufacturing processes and is held to strict quality control standards. As part of their build process, OT-Series carbon clutches are rigorously tested and documented before being delivered to the customer.

Tilton OT-Series carbon clutches offer a unique combination of a very low inertia, high torque capacity, high heat capacity and smooth engagement characteristics. Because of these features, they can be found used in endurance racing, road racing, off-road racing, drag racing and high-performance street applications.

The carbon matrix plates (driven & floater) do not warp from heat, providing consistent shifting and minimizing heat-related clutch failures. The smooth engagement characteristics of the carbon plates provide good drivability and reduce "shock" to other driveline components. Through the use of additional pressure plates (shims) and periodic rebuilds, OT-Series carbon clutch offer long life.

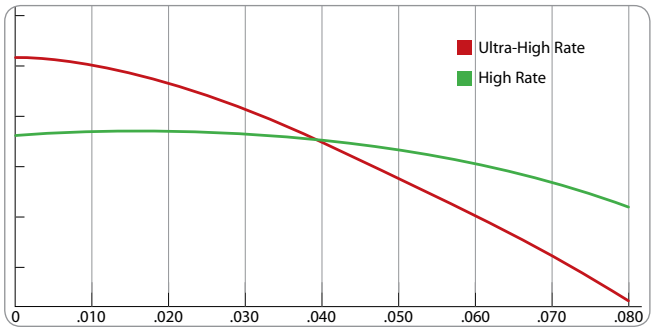
Each Tilton carbon clutch is dyno tested for torque capacity prior to shipment, marked with a unique serial number, entered into Tilton's database and shipped with a complete built sheet. Additional pressure plates (shims), designed to compensate for carbon wear, enable customers to service the clutch themselves.



OT-Series Clutch Clamp Load Curves

As standard, OT-Series clutches feature a High ratio pressure plate that offers high clamp load over a wide wear range.

As illustrated in the graph, the clamp load (torque capacity) of the High ratio pressure plate is relatively flat until .030" (.76mm) of wear. As on option, 7.25" clutches are also available with an Ultra-High ratio pressure plate. Ultra-High ratio pressure plates provide 20% more clamp load and diaphragm spring travel (modulation) than High ratio, but have a steeper clamp load curve.



High Ratio Pressure Plate

- Standard pressure plate ratio for 4.5"/5.5"/7.25" clutches
- Short release travel for quick engagement and shifting
- Flat clamp load curve

Ultra-High Ratio Pressure Plate

- Optional pressure plate ratio for 5.5"/7.25" clutches
- 20% more release travel than High ratio for improved modulation
- 20% more clamp load than High ratio for higher peak torque capacity
- Steeper clamp load curve than High ratio

Features & Information:

- 4.5" (114mm)
- 3 & 4-plate
- Push-type release
- Available for step and pot-type flywheels
- High strength one-piece lug drive cover
- Open cover design for cleaner and cooler operation
- Individually balanced and marked
- Individually tested for clamp load, release load and torque capacity
- Includes .160", .180" and .200" steel pressure plates.*
- Includes steel drive hub (specify spline size when ordering)

Typical Applications

- Road Racing
- Endurance
- Open Wheel/Formula

**excluding P/N 6514MHG-S*

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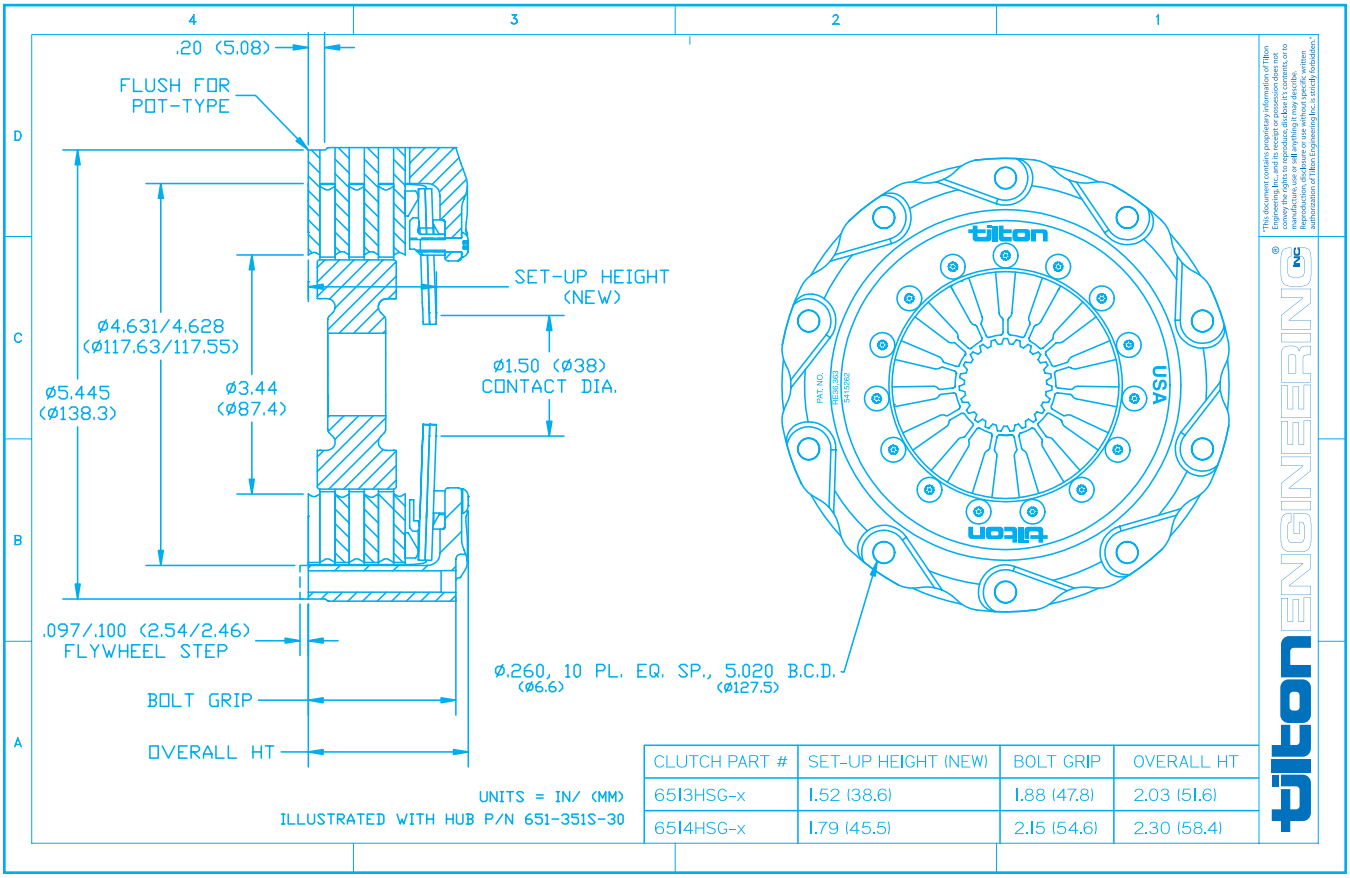


CLUTCH PART #	SET-UP HEIGHT (NEW)	BOLT GRIP	OVERALL HT
651[3]HSG-x	1.52 (38.6)	1.88 (47.8)	2.03 (51.6)
651[4]HSG-x	1.79 (45.5)	2.15 (54.6)	2.30 (58.4)

Specifications & Part Numbers

3-plate

Torque Capacity (lb-ft/Nm)	Release Load* (lb/daN)	Weight (lbs/kg)	M.O.I. (lb-in²/kg-m²)	Pressure Plate Ratio	Flywheel Type	P/N
690/938	800/352	3.2/1.5	12.3/.0036	High	Step	6513HSG-S
690/938	800/352	3.2/1.5	12.3/.0036	High	Pot	6513HSG-P

4-plate

Torque Capacity (lb-ft/Nm)	Release Load* (lb/daN)	Weight (lbs/kg)	M.O.I. (lb-in²/kg-m²)	Pressure Plate Ratio	Flywheel Type	P/N
920/1251	800/352	3.8/1.8	13.0/.0038	High	Step	6514HSG-S
920/1251	800/352	3.8/1.8	13.0/.0038	High	Pot	6514HSG-P

Champ Car/Panoz DP01 spec **- Includes .160" steel pressure plate**

Torque Capacity (lb-ft/Nm)	Release Load* (lb/daN)	Weight (lbs/kg)	M.O.I. (lb-in²/kg-m²)	Pressure Plate Ratio	Flywheel Type	P/N
920/1251	800/352	3.8/1.7	15.3/.0045	High	Step	6514MHG-S

Values listed are for release bearings with a 38mm contact diameter. Larger contact diameters will increase release load.

Please specify input shaft spline size when ordering.

Due to their specialized nature, Tilton OT-Series Carbon clutches should only be serviced/rebuilt by the factory.

Please contact Tilton Engineering for further information.

Service Parts

- Pressure Plate

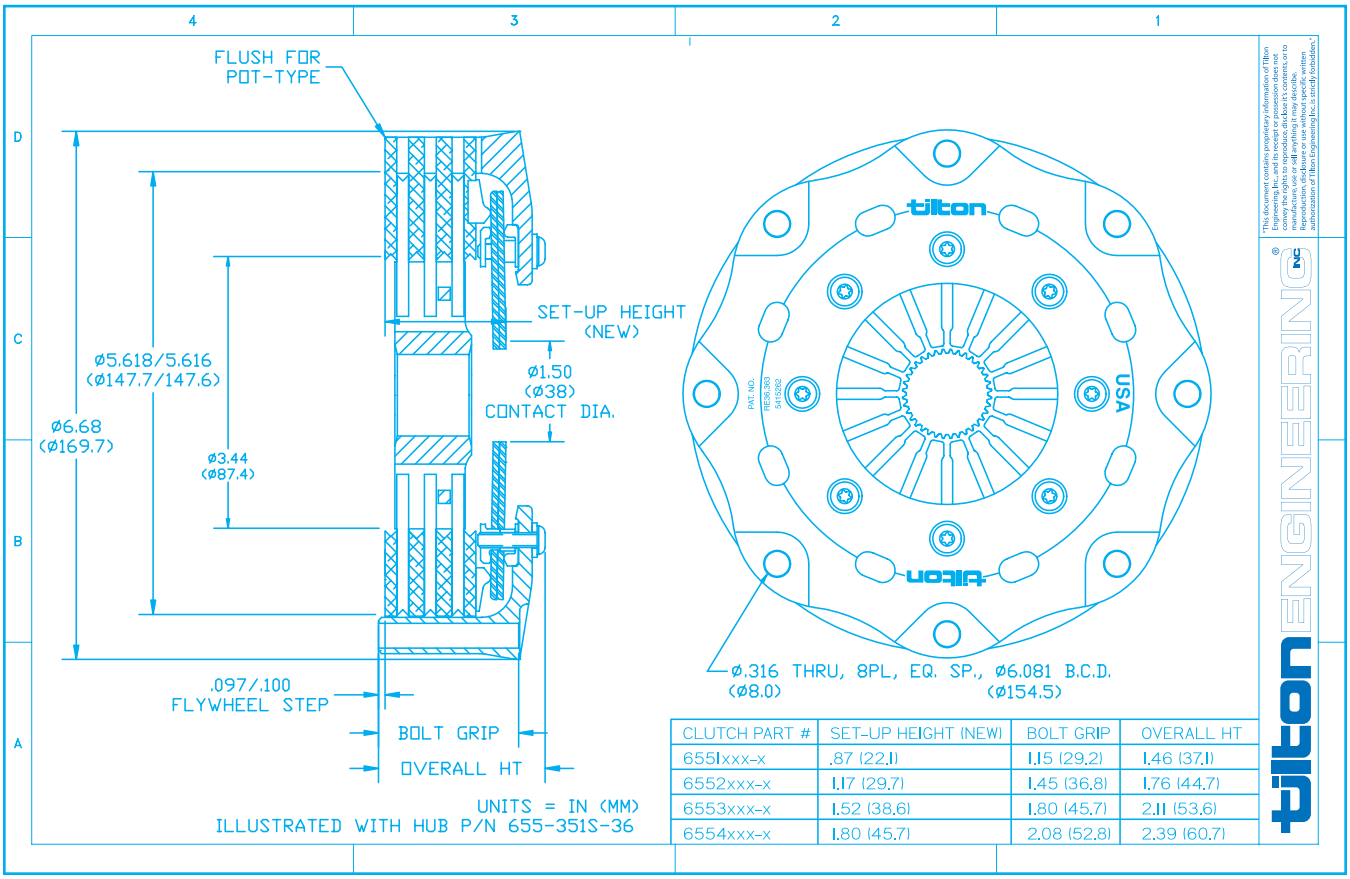
Description	Part Number
Pressure plate, .160" thick, high ratio	651-118H-160S
Pressure plate, .170" thick, high ratio	651-118H-170S
Pressure plate, .180" thick, high ratio	651-118H-180S
Pressure plate, .190" thick, high ratio	651-118H-190S
Pressure plate, .200" thick, high ratio	651-118H-200S
Pressure plate, .210" thick, high ratio	651-118H-210S
Pressure plate, .220" thick, high ratio	651-118H-220S
Pressure plate, .230" thick, high ratio	651-118H-230S
Pressure plate, .240" thick, high ratio	651-118H-240S
Pressure plate, .250" thick, high ratio	651-118H-250S
Pressure plate, .260" thick, high ratio	651-118H-260S
Pressure plate, .270" thick, high ratio	651-118H-270S
Pressure plate, 280" thick, high ratio	651-118H-280S
Pressure plate, 290" thick, high ratio	651-118H-290S
Pressure plate, .300" thick, high ratio	651-118H-300S
Pressure plate, .310" thick, high ratio	651-118H-310S

Features & Information:

- 5.5" (140mm)
- 1, 2, 3 & 4-plate
- Push-type release
- Available for step and pot-type flywheels
- High strength one-piece lug drive cover
- Open cover design for cleaner and cooler operation
- Individually balanced and marked
- Individually tested for clamp load, release load and torque capacity
- Includes .187" and .212" steel pressure plates
- Includes steel drive hub (specify spline size when ordering)

Typical Applications

- Road Racing
- Endurance
- Open Wheel/Formula



CLUTCH PART #	SET-UP HEIGHT (NEW)	BOLT GRIP	OVERALL HT
6551xxx-x	.87 (22.1)	1.15 (29.2)	1.46 (37.1)
6552xxx-x	1.17 (29.7)	1.45 (36.8)	1.76 (44.7)
6553xxx-x	1.52 (38.6)	1.80 (45.7)	2.11 (53.6)
6554xxx-x	1.80 (45.7)	2.08 (52.8)	2.39 (60.7)

Specifications & Part Numbers

1-plate

Torque Capacity (lb-ft/Nm)	Release Load* (lb/daN)	Weight (lbs/kg)	M.O.I. (lb-in2/kg-m2)	Pressure Plate Ratio	Flywheel Type	P/N
250/340	850/375	3.0/1.4	14.6/.0043	High	Step	6551HSG-S
250/340	850/375	3.0/1.4	14.6/.0043	High	Pot	6551HSG-P
300/408	850/375	3.0/1.4	14.6/.0043	Ultra-high	Step	6551USG-S
300/408	850/375	3.0/1.4	14.6/.0043	Ultra-high	Pot	6551USG-P

2-plate

Torque Capacity (lb-ft/Nm)	Release Load* (lb/daN)	Weight (lbs/kg)	M.O.I. (lb-in2/kg-m2)	Pressure Plate Ratio	Flywheel Type	P/N
500/680	850/375	3.7/1.7	17.8/.0052	High	Step	6552HSG-S
500/680	850/375	3.7/1.7	17.8/.0052	High	Pot	6552HSG-P
600/816	850/375	3.7/1.7	17.8/.0052	Ultra-high	Step	6552USG-S
600/816	850/375	3.7/1.7	17.8/.0052	Ultra-high	Pot	6552USG-P

3-plate

Torque Capacity (lb-ft/Nm)	Release Load* (lb/daN)	Weight (lbs/kg)	M.O.I. (lb-in2/kg-m2)	Pressure Plate Ratio	Flywheel Type	P/N
750/1020	850/375	4.4/2.0	22.0/.0065	High	Step	6553HSG-S
750/1020	850/375	4.4/2.0	22.0/.0065	High	Pot	6553HSG-P
900/1224	850/375	4.4/2.0	22.0/.0065	Ultra-high	Step	6553USG-S
900/1224	850/375	4.4/2.0	22.0/.0065	Ultra-high	Pot	6553USG-P

4-plate

Torque Capacity (lb-ft/Nm)	Release Load* (lb/daN)	Weight (lbs/kg)	M.O.I. (lb-in2/kg-m2)	Pressure Plate Ratio	Flywheel Type	P/N
1000/1360	850/375	5.2/2.3	25.3/.0074	High	Step	6554HSG-S
1000/1360	850/375	5.2/2.3	25.3/.0074	High	Pot	6554HSG-P

** Values listed are typical for release bearings with a 38mm contact diameter. Larger contact diameters will increase release load.*

Please specify transmission input shaft spline size when ordering.

Due to their specialized nature, Tilton OT-Series Carbon clutches should only be serviced/rebuilt by the factory. Please contact Tilton Engineering for further information.

Service Parts

- Pressure Plate

Description	Part Number
Pressure plate, .187" thick, high ratio	655-118H-187S
Pressure plate, .187" thick, ultra-high ratio	655-118U-187S
Pressure plate, .212" thick, high ratio	655-118H-212S
Pressure plate, .212" thick, ultra-high ratio	655-118U-212S
Pressure plate, .237" thick, high ratio	655-118H-237S

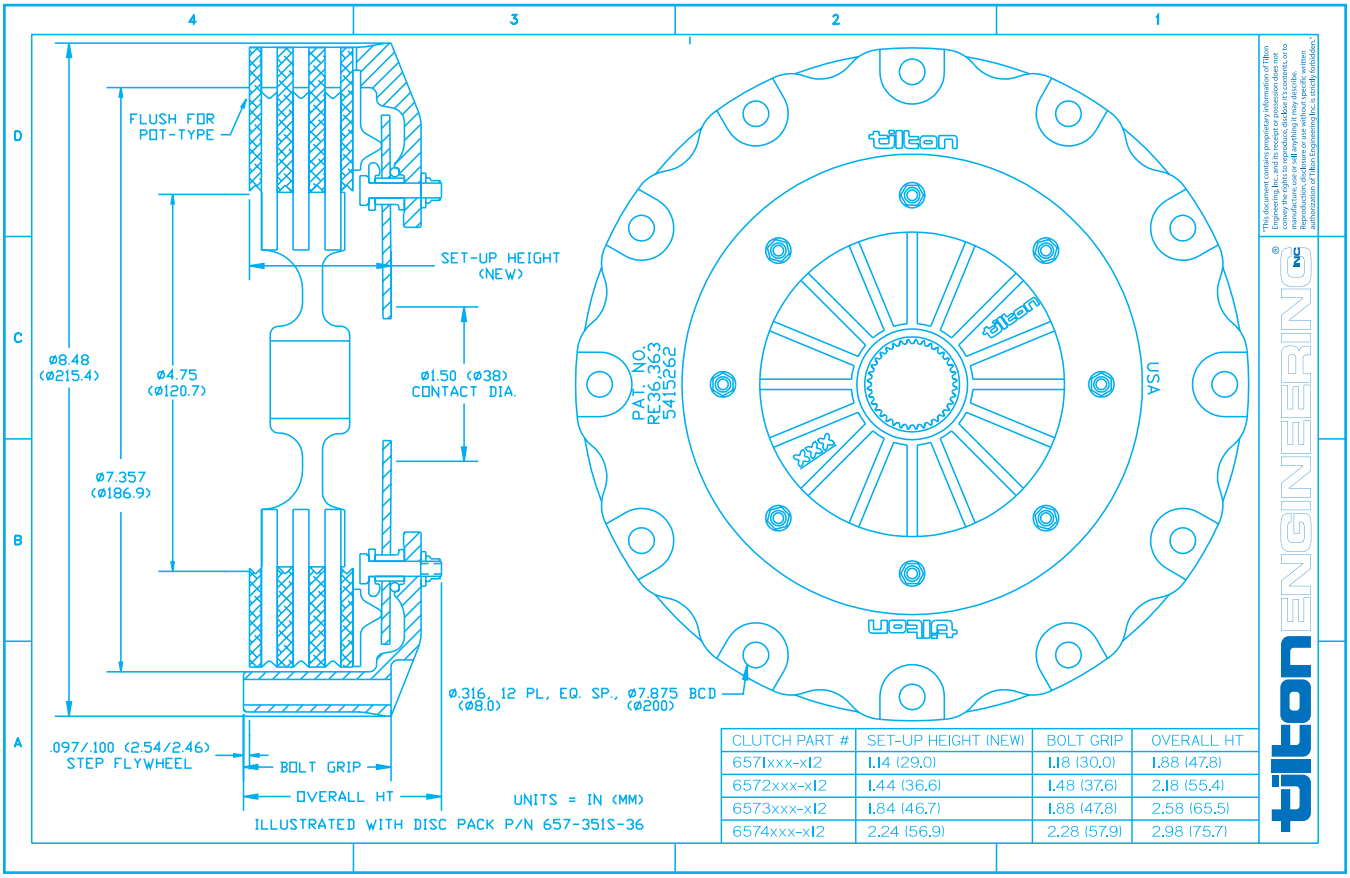
Features & Information:

- 7.25" (185mm)
- 1, 2, 3 & 4-plate
- Push-type release
- Available for step and pot-type flywheels
- High strength one-piece lug drive cover
- Open cover design for cleaner and cooler operation
- Individually balanced and marked
- Individually tested for clamp load, release load and torque capacity
- Includes .365", .390" and .415" aluminum pressure plates. Steel pressure plates are available as an option.
- Includes steel drive hub (specify spline size when ordering)

Typical Applications

- Road Racing
- Endurance
- Open Wheel/Formula
- Off Road
- High Performance Street/Strip

Note: *7.25" OT-Series carbon clutches can be ordered with steel pressure plates (.365", .390") as an option. Steel pressure plates are designed to offer additional heat capacity over the standard aluminum versions. To order, add an "S" after the pressure plate designation (H or U) within the clutch's part number. Example: 6573USG-S12*



CLUTCH PART #	SET-UP HEIGHT (NEW)	BOLT GRIP	OVERALL HT
6571xxx-x12	1.14 (29.0)	1.18 (30.0)	1.88 (47.8)
6572xxx-x12	1.44 (36.6)	1.48 (37.6)	2.18 (55.4)
6573xxx-x12	1.84 (46.7)	1.88 (47.8)	2.58 (65.5)
6574xxx-x12	2.24 (56.9)	2.28 (57.9)	2.98 (75.7)

Specifications & Part Numbers

1-plate

Torque Capacity (lb-ft/Nm)	Release Load* (lb/daN)	Weight (lbs/kg)	M.O.I. (lb-in2/kg-m2)	Pressure Plate Ratio	Flywheel Type	P/N
310/422	620/273	4.4/2.0	42.0/.0124	High	Step	6571HG-S12
310/422	620/273	4.4/2.0	42.0/.0124	High	Pot	6571HG-P12
370/503	620/273	4.4/2.0	42.0/.0124	Ultra-high	Step	6571UG-S12
370/503	620/273	4.4/2.0	42.0/.0124	Ultra-high	Pot	6571UG-P12
350/476	690/304	4.4/2.0	42.0/.0124	High	Step	6571HGG-S12
350/476	690/304	4.4/2.0	42.0/.0124	High	Pot	6571HGG-P12
420/571	690/304	4.4/2.0	42.0/.0124	Ultra-high	Step	6571UGG-S12
420/571	690/304	4.4/2.0	42.0/.0124	Ultra-high	Pot	6571UGG-P12
405/551	750/330	4.4/2.0	42.0/.0124	High	Step	6571HGGG-S12
405/551	750/330	4.4/2.0	42.0/.0124	High	Pot	6571HGGG-P12
485/660	750/330	4.4/2.0	42.0/.0124	Ultra-high	Step	6571UGGG-S12
485/660	750/330	4.4/2.0	42.0/.0124	Ultra-high	Pot	6571UGGG-P12

2-plate

Torque Capacity (lb-ft/Nm)	Release Load* (lb/daN)	Weight (lbs/kg)	M.O.I. (lb-in2/kg-m2)	Pressure Plate Ratio	Flywheel Type	P/N
620/844	620/273	5.3/2.4	49.7/.0146	High	Step	6572HG-S12
620/844	620/273	5.3/2.4	49.7/.0146	High	Pot	6572HG-P12
740/1006	620/273	5.3/2.4	49.7/.0146	Ultra-high	Step	6572UG-S12
740/1006	620/273	5.3/2.4	49.7/.0146	Ultra-high	Pot	6572UG-P12
700/952	690/304	5.3/2.4	49.7/.0146	High	Step	6572HGG-S12
700/952	690/304	5.3/2.4	49.7/.0146	High	Pot	6572HGG-P12
840/1142	690/304	5.3/2.4	49.7/.0146	Ultra-high	Step	6572UGG-S12
840/1142	690/304	5.3/2.4	49.7/.0146	Ultra-high	Pot	6572UGG-P12
810/1102	750/330	5.3/2.4	49.7/.0146	High	Step	6572HGGG-S12
810/1102	750/330	5.3/2.4	49.7/.0146	High	Pot	6572HGGG-P12
970/1320	750/330	5.3/2.4	49.7/.0146	Ultra-high	Step	6572UGGG-S12
970/1320	750/330	5.3/2.4	49.7/.0146	Ultra-high	Pot	6572UGGG-P12

3-plate

Torque Capacity (lb-ft/Nm)	Release Load* (lb/daN)	Weight (lbs/kg)	M.O.I. ($lb\text{-}in^2/kg\text{-}m^2$)	Pressure Plate Ratio	Flywheel Type	P/N
930/1266	620/273	6.4/2.9	59.3/.0175	High	Step	6573HG-S12
930/1266	620/273	6.4/2.9	59.3/.0175	High	Pot	6573HG-P12
1110/1509	620273	6.4/2.9	59.3/.0175	Ultra-high	Step	6573UG-S12
1110/1509	620/273	6.4/2.9	59.3/.0175	Ultra-high	Pot	6573UG-P12
1050/1428	690/304	6.4/2.9	59.3/.0175	High	Step	6573HGG-S12
1050/1428	690/304	6.4/2.9	59.3/.0175	High	Pot	6573HGG-P12
1260/1713	690/304	6.4/2.9	59.3/.0175	Ultra-high	Step	6573UGG-S12
1260/1713	690/304	6.4/2.9	59.3/.0175	Ultra-high	Pot	6573UGG-P12
1215/1653	750/330	6.4/2.9	59.3/.0175	High	Step	6573HGGG-S12
1215/1653	750/330	6.4/2.9	59.3/.0175	High	Pot	6573HGGG-P12
1455/1980	750/330	6.4/2.9	59.3/.0175	Ultra-high	Step	6573UGGG-S12
1455/1980	750/330	6.4/2.9	59.3/.0175	Ultra-high	Pot	6573UGGG-P12

Continued »

4-plate

Torque Capacity (lb-ft/Nm)	Release Load* (lb/daN)	Weight (lbs/kg)	M.O.I. (lb-in²/kg-m²)	Pressure Plate Ratio	Flywheel Type	P/N
1240/1686	620/273	8.1/3.7	69.4/.0200	High	Step	6574HG-S
1240/1686	620/273	8.1/3.7	69.4/.0200	High	Pot	6574HG-P
1400/1904	690/304	8.1/3.7	69.4/.0200	High	Step	6574HGG-S
1400/1904	690/304	8.1/3.7	69.4/.0200	High	Pot	6574HGG-P
1620/2203	750/330	8.1/3.7	69.4/.0020	High	Step	6574HGGG-S
1620/2203	750/330	8.1/3.7	69.4/.0020	High	Pot	6574HGGG-P

** Values listed are typical for release bearings with a 44mm contact diameter.*
Larger contact diameters will increase release load.

Please specify input shaft spline size when ordering.

Due to their specialized nature, Tilton OT-Series Carbon clutches should only be serviced/rebuilt by the factory.
Please contact Tilton Engineering for further information.

Service Parts

- Pressure Plate

Description	Part Number
Pressure plate, .365" thick, high ratio, aluminum	657-118H-12-365
Pressure plate, .365" thick, high ratio, steel	657-118H-12-365S
Pressure plate, .365" thick, ultra-high ratio, aluminum	657-118U-12-365
Pressure plate, .365" thick, ultra-high ratio, steel	657-118U-12-365S
Pressure plate, .390" thick, high ratio, aluminum	657-118H-12-390
Pressure plate, .390" thick, high ratio, steel	657-118H-12-390S
Pressure plate, .390" thick, ultra-high ratio, aluminum	657-118U-12-390
Pressure plate, .390" thick, ultra-high ratio, steel	657-118U-12-390S
Pressure plate, .415" thick, high ratio, aluminum	657-118H-12-415
Pressure plate, .415" thick, ultra-high ratio, aluminum	657-118U-12-415

Photo courtesy of LG Motorsports

Customer Profile

Car: Chevy Corvette C6
Team: LG Motorsports
Series: SCCA World Challenge (GT)

Maximizing the clutch performance and life requires that you maintain your clutch on scheduled maintenance intervals.

When performing this maintenance on your carbon clutch use the following tips to ensure proper function after you are done.

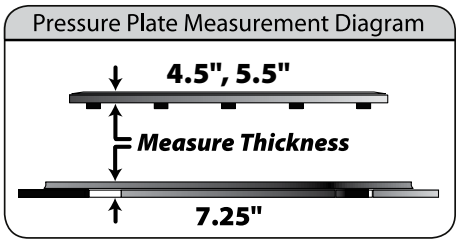
Locate your build sheet

Your build sheet is specific to your clutch and contains critical maintenance information

Measure the stack height (total height of pressure and carbon plates).

Measurements must be taken with a micrometer, not calipers, to the nearest .0005" (.01 mm).

Measure the pressure plate in three locations and use the average in your calculations of wear.



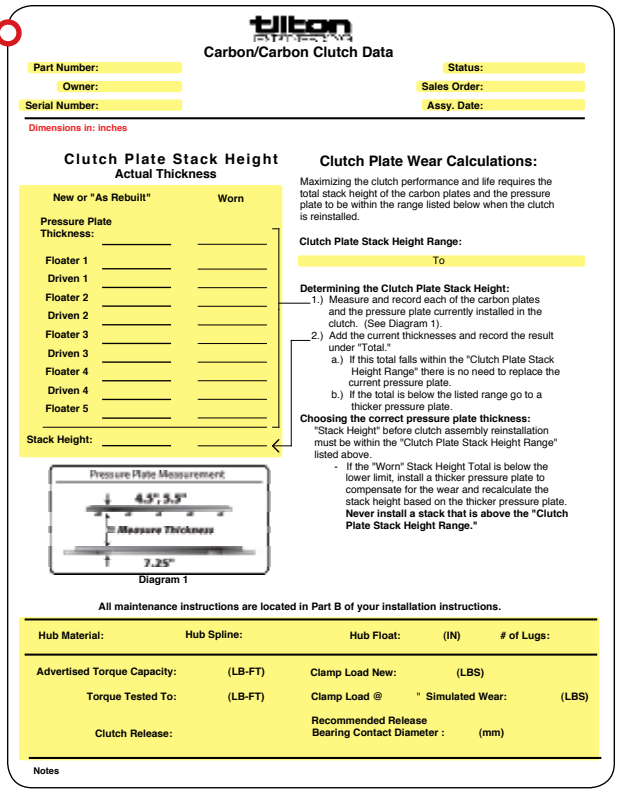
Measure each carbon plate in three locations across the wear area only and use the average in your calculations of wear (.025" max wear per plate).

Never install a pressure plate that will make your stack height taller than what is was new or as rebuilt.

Whenever inspecting a clutch, be sure to replace all of the plates in the same position and orientation in which they were originally installed.

If your carbon clutch is in need of a rebuild, it usually costs around 10% of the cost of a new carbon clutch. If you send it directly, call first to obtain a Returned Merchandise Authorization (RMA) number. You will be provided with a quote before work is performed. All rebuilt carbon clutches are tested for clean release, torque capacity, and clamp load before being returned to the customer.

All maintenance instructions are located in Part B of your installation instructions and are also available online by visiting www.tiltonracing.com and clicking on the "Technical" link in the top menu.



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Carbon/Carbon Clutch Data

Part Number: Status:
Owner: Sales Order:
Serial Number: Assy. Date:

Dimensions in: inches

Clutch Plate Stack Height
Actual Thickness

	New or "As Rebuilt"	Worn
Pressure Plate Thickness:		
Floater 1		
Driven 1		
Floater 2		
Driven 2		
Floater 3		
Driven 3		
Floater 4		
Driven 4		
Floater 5		
Stack Height:		

Pressure Plate Measurement
4.5", 5.5"
Measure Thickness
7.25"
Diagram 1

Clutch Plate Wear Calculations:

Maximizing the clutch performance and life requires the total stack height of the carbon plates and the pressure plate to be within the range listed below when the clutch is reinstalled.

Clutch Plate Stack Height Range:
To

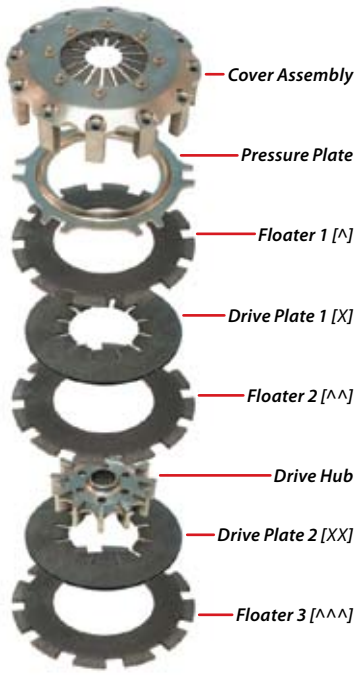
Determining the Clutch Plate Stack Height:
1.) Measure and record each of the carbon plates and the pressure plate currently installed in the clutch. (See Diagram 1).
2.) Add the current thicknesses and record the result under "Total."
a.) If this total falls within the "Clutch Plate Stack Height Range" there is no need to replace the current pressure plate.
b.) If the total is below the listed range go to a thicker pressure plate.

Choosing the correct pressure plate thickness:
"Stack Height" before clutch assembly reinstallation must be within the "Clutch Plate Stack Height Range" listed above.
- If the "Worn" Stack Height Total is below the lower limit, install a thicker pressure plate to compensate for the wear and recalculate the stack height based on the thicker pressure plate. **Never install a stack that is above the "Clutch Plate Stack Height Range."**

All maintenance instructions are located in Part B of your installation instructions.

Hub Material:	Hub Spline:	Hub Float:	(IN)	# of Lugs:
Advertised Torque Capacity:	(LB-FT)	Clamp Load New:	(LBS)	
Torque Tested To:	(LB-FT)	Clamp Load @	" Simulated Wear:	(LBS)
Clutch Release:		Recommended Release Bearing Contact Diameter :	(mm)	

Notes

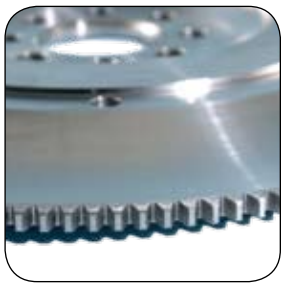


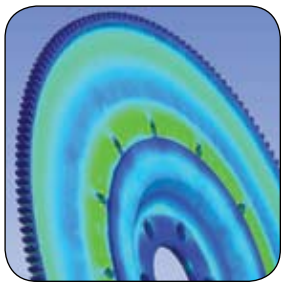
FLYWHEELS

In 1973, Tilton began manufacturing lightweight aluminum flywheels. As technology in racing advanced, and the demand for stronger and lower inertia flywheels grew, Tilton began machining flywheels from billet steel. Today, Tilton flywheels are subjected to some of the most grueling racing conditions. They can be found on NASCAR Cup engines, Grand Am DP cars competing in the 24 Hours of Daytona and most other forms of racing.

Utilizing Tilton's 35+ years of experience, flywheels are designed using the latest CAD software and are fully optimized for strength and inertia using Finite Element Analysis (FEA). CNC machined from billet or forged (varies by application) steel, Tilton flywheels offer precision balance, high strength and low inertia. After machining, flywheels received a surface heat treatment for the ultimate in strength and wear resistance.

During the last 35 years, Tilton has engineered over 1000 flywheels for racing and high performance applications. The flywheels listed on the following pages are our most popular flywheels. Tilton also produces flywheels for many specialty applications. Please contact Tilton for further information.





Features:

Billet or forged steel
Machined from preheat-treated billet or forged steel (varies by application) for maximum strength, heat capacity and low inertia

Integrally cut ring gear
Integrally cut ring gear for high reliability and inertia reduction

Optimized for strength and inertia using Finite Element Analysis (FEA)
Engineered using Finite Element Analysis to insure that strength and inertia are fully optimized

Precision machined
All flywheels are precision machined for smooth engine operation and proper fitment

Surface heat treat for wear resistance
Surface heat-treated after machining for wear resistance at the ring gear and clutch friction surface

Quality assurance using Coordinate Measuring Machine (CMM)
Our automated CMM measures our products using the most sophisticated technology available, ensuring each machined piece matches the strict demands of our Engineering Department.

Application	# of teeth	Clutch Size	Type	Weight (lbs)	MOI (lb-in²)	P/N	Notes
BMW							
BMW E46, 6-cyl	112	5.5"	Step	5.04	66	51-3560	OE diameter
Chevy							
Chevy V8 2-pc rear main seal	102	5.5"	Step	3.65	35	51-651	52-Series UTGC packages
Chevy V8 2-pc rear main seal	102	4.5"	Step	3.13	29	51-645	52-Series UTGC packages
Chevy V8 2-pc rear main seal	110	7.25"	Step	4.71	52	51-6300	52-Series 7.25" packages
Chevy V8 2-pc rear main seal	153	7.25"	Step	7.48	132	51-6200	53-Series OE packages, forged
Chevy V8 2-pc rear main seal	153	7.25"	Step	6.64	115	51-6201	53-Series OE package, forged, lightened w/holes, USAR Pro Cup legal
Chevy V8 2-pc rear main seal	90	5.5"	Step	3.80	25	51-701	59-Series packages
Chevy V8 2-pc rear main seal	104	7.25"	Step	5.71	77	51-052-1	requires Super Starter (P/N 54-10005)
Chevy V8 2-pc rear main seal	N/A	5.5"	Step	1.27	13	50-701	59-Series packages, no ring gear
Chevy LS1/2/6/7 V8	168	7.25"	Step	7.94	178	51-4452	OE diameter, Corvette C5/C6
Chevy LS1/2/6/7 V8	153	5.5"	Step	6.24	114	51-4473	Corvette C5/C6, requires Super Starter (P/N 54-10012)
Chevy LS1/2/6/7 V8	110	7.25"	Step	5.05	53	51-6340	52-Series 7.25" packages
Chevy LS1/2/6/7 V8	102	5.5"	Step	4.39	35	51-659	52-Series UTGC packages
Chevy LS1/2/6/7 V8	102	5.5"	Pot	3.10	29	51-661	52-Series UTGC packages
Chevy LS1/2/6/7 V8	102	4.5"	Step	3.63	28	51-631	52-Series UTGC packages
Chevy R07 V8	110	7.25"	Step	4.85	52	51-6310	52-Series 7.25" packages
Chevy R07 V8	153	7.25"	Step	7.54	131	51-6202	53-Series OE packages, forged
Dodge							
Dodge R5 V8, Chevy crank pattern	153	7.25"	Step	7.46	148	51-041	53-Series OE packages, standard
Dodge R5 V8, Chevy crank pattern	153	7.25"	Step	7.20	140	51-042	53-Series OE packages, lightweight
Dodge R5 V8, Chevy crank pattern	153	7.25"	Step	7.32	128	51-6100	53-Series OE packages, forged
Dodge R5 V8, Chevy crank pattern	110	7.25"	Step	4.85	52	51-6310	52-Series 7.25" packages
Dodge R5 V8, Chevy crank pattern	102	5.5"	Step	3.65	35	51-651	52-Series UTGC packages
Dodge R5 V8, Ford crank pattern	102	5.5"	Step	3.60	30	51-673	52-Series UTGC packages
Dodge Viper (1992-2002)	152	7.25"	Step	12.50	334	51-822*	OE diameter
Dodge Viper GTS-R	120	7.25"	Pot	5.73	91	51-823	Tilton Viper GTS-R package
Ford							
Ford Sm Blk V8	157	7.25"	Step	8.85	187	51-1202	OE diameter
Ford Sm Blk V8	153	7.25"	Step	8.80	170	51-1206	53-Series OE packages, standard
Ford Sm Blk V8	153	7.25"	Step	7.90	149	51-1208	53-Series OE packages, lightweight
Ford Sm Blk V8	153	7.25"	Step	6.58	112	51-1212	53-Series OE packages, lightened w/holes, USAR Pro Cup legal
Ford Sm Blk V8	110	7.25"	Step	4.93	52	51-6320	52-Series 7.25" packages
Ford Sm Blk V8	102	5.5"	Step	4.18	35	51-653	52-Series UTGC packages
Ford Sm Blk V8	102	4.5"	Step	3.44	30	51-640	52-Series UTGC packages

Application	# of teeth	Clutch Size	Type	Weight (lbs)	MOI (lb-in2)	P/N	Notes
Honda							
Honda B16A/B18, light	112	7.25"	Step	6.00	85	51-1160	OE diameter, lightweight
Honda B16A/B18, heavy	112	7.25"	Step	9.80	155	51-1166	OE diameter, heavy
Honda H22	120	7.25"	Step	6.73	104	51-1170	OE diameter
Honda K20/K24	120	7.25"	Step	6.30	102	51-1180	OE diameter
Honda S2000 (F20C)	110	7.25"	Step	8.80	125	51-1190	OE diameter
Mitsubishi							
Eclipse 6-bolt AWD	106	7.25"	Step	8.47	122	51-4330	OE diameter
EVO IV-IX	114	7.25"	Step	10.9	175	51-4334	OE diameter
Nissan							
Nissan 350Z (VQ35)	124	7.25"	Step	9.72	183	51-4207	OE diameter
Porsche							
Porsche 996/997 GT3 RSR	132	5.5"	Pot	6.23	84	51-4005**	OE diameter, small trigger ring
Porsche 993/996/997	132	5.5"	Pot	7.2	111	51-4011	OE Diameter, OE timing trigger ring diameter
Porsche 993/996/997	132	7.25"	Pot	7.88	122	51-4008	OE Diameter, OE timing trigger ring diameter
Porsche 911 (915 trans)	130	7.25"	Pot	6.90	93	51-4024	OE diameter
Subaru							
Subaru WRX/STI (2002-2007)	124	7.25"	Step	11.60	202	51-4122	OE diameter
Toyota							
Toyota 4AG, Swift 008/014 chassis	74	5.5"	Step	3.44	27	51-5005	Atlantic, metallic clutches
Toyota 4AG, Swift 008/014 chassis	74	5.5"	Step	3.02	21	51-5006	Atlantic, carbon clutches
Toyota Supra MKIV	115	7.25"	Step	12.00	201	51-5021	OE diameter
TRD V8 (NASCAR)	153	7.25"	Step	6.96	124	51-4060	Tilton 53-Series OE packages
TRD V8 (NASCAR)	110	7.25"	Step	4.89	52	51-6330	Tilton 52-Series 7.25" packages

* Tilton flywheels for 2003-on Vipers are available exclusively through Dodge Motorsports

**Distributed exclusively, in North America, through Porsche Motorsports North America (PMNA)

HYDRAULIC RELEASE BEARINGS

Tilton offers a wide range of hydraulic release bearings (HRB) for use with push-type clutches. Hydraulic release bearings are available for use with smaller diameter racing clutches (4.5", 5.5" & 7.25") and most OE-type clutches.

Tilton hydraulic release bearings are designed to eliminate the need for mechanical linkages, pivot balls, spacers and external slave cylinders.

Modulation and release travel can be adjusted by changing master cylinder bore size and/or clutch pedal ratio. Most Tilton hydraulic release bearing assemblies have a total of .700" of piston travel.

Features:

Monoseal Technology

Tilton's unique monoseal technology is incorporated into all hydraulic release bearings. The high temperature monoseal features a quad tensioner to ensure proper seal tension. Seals have been tested to hundreds of thousands of actuation without failure. Tilton hydraulic release bearings feature a wiper seal to provide protection from debris entering the bore.

Constant Contact Design/Self Adjusting

The constant contact design of Tilton hydraulic release bearings maintains pedal feel even as the clutch wears. In addition, Tilton hydraulic release bearings self-adjust for clutch wear.

Proprietary Coatings

Tilton hydraulic release bearings feature superior materials and proprietary low friction coatings, providing longevity and consistency.

High Quality Bearings

Tilton hydraulic release bearing assemblies feature high-quality bearings to provide smooth and reliable operation.

All* Tilton hydraulic release bearings have 1.221 in^2 of piston area.
The following table lists recommended master cylinder bore sizes for use with Tilton hydraulic release bearings

Clutch Type	Bearing Contact Diameter	Recommend M/C Bore Size
4.5" - 5.5" Tilton	1.50" (38mm)	5/8" (15.9mm)
7.25" Tilton	1.73" (44mm)	3/4" (19.1mm)
8.5" Tilton; 4.5" - 7.25" (non-Tilton)	2.05" (52mm)	3/4" (19.1mm)
8.5" - 10.5" Bent Finger & Lever-Type	1.68" - 2.60" (47mm - 66 mm)	7/8" (22.2 mm)
11" & larger Bent Finger & Lever-Type	1.68" - 3.30" (47mm - 84 mm)	7/8" (22.2 mm)

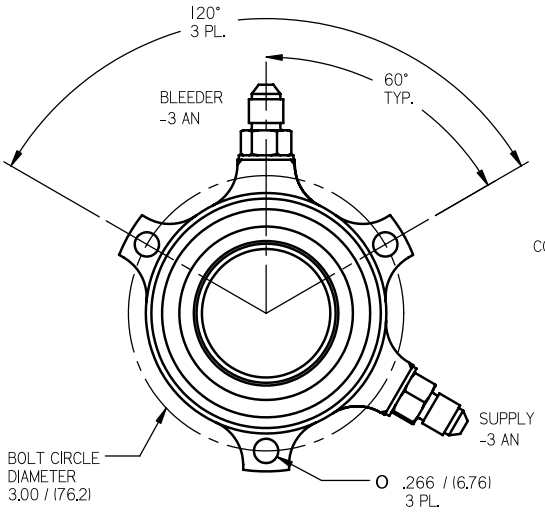
** Except 9000-Series*

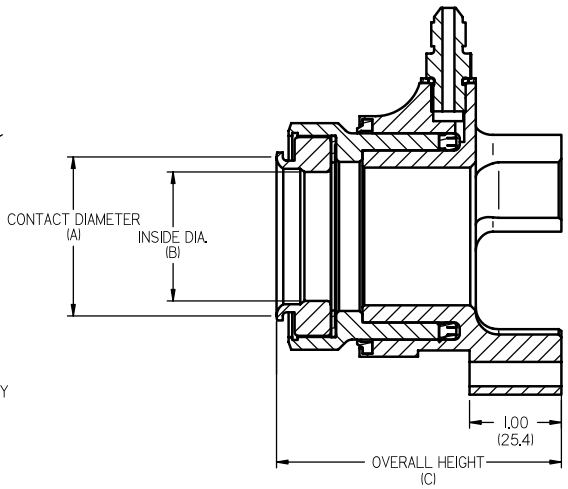
Typical Application: Bulk head mounted inside transmissions or bellhousings.
Mount: 3-bolt pattern
Material: Billet aluminum body and piston
Piston area: 1.221 in^2 (788mm^2)
Maximum stroke: .700" (17.8mm)
Ports: AN3 (3/8"-24)
Weight: .92 lbs (varies by part number)
Includes: AN3 steel braided line (90") and related fittings

Clutch Type	Part Number	Contact Diameter (A)	Inside Diameter (B)	Overall Height (C)
4.5" - 5.5" Tilton	61-303	1.50" (38mm)	1.26" (32.0mm)	3.10" (78.8mm)
7.25" Tilton	61-302	1.73" (44mm)	1.41" (35.8mm)	3.10" (78.8mm)
8.5" Tilton; 4.5" - 7.25" non-Tilton	61-300	2.05" (52mm)	1.40" (35.6mm)	3.02" (76.7mm)
8.5" - 10.5" Bent Finger & Lever-Type	61-301	1.68" - 2.60" (47mm - 66mm)	1.40" (35.6mm)	2.78" (70.6mm)

Service Parts

Description	Part Number
Seal kit	62-905
Replacement bearing, 38mm contact diameter, radius face	62-008
Replacement bearing, 44mm contact diameter, radius face	62-031
Replacement bearing, 52mm contact diameter, radius face	62-002
Replacement bearing, 47-66 mm contact diameter, flat face	62-616
Hydraulic line, braided, AN3, 90", two female fittings	62-563
Fitting, AN3, male, straight	TE2089-189
Fitting, AN3, female, straight	62-515
Fitting, AN3, female, bleed	62-543
Bleedscrew, AN3	28696
Lock-O-Seal (washer & o-ring)	62-550





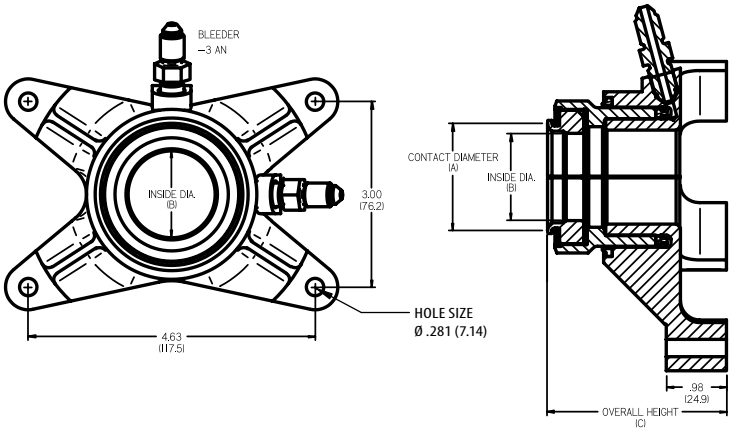
See page 48 for replacement and optional release bearing assembly pistons.

Typical application:
Direct mount into Tilton 52/53-Series steel bellhousings.
Can also be adapted to mount inside other bellhousings.
Mount: 4-bolt pattern
Material: Cast aluminum body and billet aluminum piston
Piston area: 1.221 in^2 (788mm^2)
Maximum stroke: .700" (17.8mm)
Ports: AN3 (3/8"-24)
Weight: 1.29 lbs (varies by part number)
Includes: AN3 steel braided line (90") and related fittings

Clutch Type	Part Number	Contact Diameter (A)	Inside Diameter (B)	Overall Height (C)
4.5" - 5.5" Tilton	61-403	1.50" (38mm)	1.26" (32.0mm)	2.91" (73.9mm)
7.25" Tilton	61-402	1.73" (44mm)	1.41" (35.8mm)	2.90" (73.7mm)
8.5" Tilton; 4.5" - 7.25" non-Tilton	61-400	2.05" (52mm)	1.40" (35.6mm)	2.82" (71.6mm)
8.5" - 10.5" Bent Finger & Lever-Type	61-401	1.68" - 2.60" (47mm - 66mm)	1.40" (35.6mm)	2.57" (65.3mm)
11" & larger Bent Finger & Lever-Type	61-404	1.68" - 2.60" (47mm - 84mm)	1.40" (35.6mm)	2.63" (66.8mm)

Service Parts

Description	Part Number
Seal kit	62-905
Replacement bearing, 38mm contact diameter, radius face	62-008
Replacement bearing, 44mm contact diameter, radius face	62-031
Replacement bearing, 52mm contact diameter, radius face	62-002
Replacement bearing, 47-66 mm contact diameter, flat face	62-616
Thrust ring, enlarges P/N 62-616 contact diameter to 84mm	62-6161
Retaining ring, for use with P/N 62-6161	62-6162
Hydraulic line, braided, AN3, 90", two female fittings	62-563
Fitting, union, AN3, male	73-815-3L
Fitting, AN3, female, straight	62-515
Fitting, AN3, female, bleed	62-543
Bleedscrew, AN3	28696



Description: Modular hydraulic release bearing that is designed to replace stock-type release bearing linkage and/or slave cylinder, mounting in place of the standard transmission input shaft bearing retainer.
Mount: Transmission (with base assemblies listed below)
Material: Billet aluminum body and piston
Piston area: 1.221 in^2 (788m^{m2})
Piston travel: .700" (17.8mm)
Ports: 7/16"-20
Includes: AN4 steel braided line (90") and related fittings

600-Series hydraulic release bearings are a modular system, comprising of a separate hydraulic release bearing assembly and mounting base (bearing retainer). The part number for the hydraulic bearing assembly is dependant on the clutch you will be using in your vehicle. The part number for the mounting base is dependant on the transmission you will be using in your vehicle. Each hydraulic bearing assembly and mounting base combination has a range of adjustment.

Before You Order

Due to the wide range of aftermarket parts available, we advise that you check the space available within your bellhousing before ordering. The following is the procedure we recommend for checking available space:

1. Mount the flywheel, clutch and bellhousing to the engine.
2. Using an accurate measuring tool, measure from the diaphragm spring (where the release bearing contacts) to the outside of the bellhousing (transmission mating face).

Once you determine your available space, check (in the table below) the adjustment of the 600-Series hydraulic release bearing assembly and mounting base combination for your application. Please note that you will also need to factor initial release bearing clearance into your set-up. For OE-type (bent finger & lever) clutches, we recommend .100" - .150" of initial bearing clearance. For smaller diameter racing clutches (4.5" - 7.25"), we recommend .170" - .230" of initial bearing clearance.

For example: You are using an OE-type clutch and measured 3.000" of available space in your bellhousing. During the installation of the 600-Series hydraulic release bearing system, you would adjust the two pieces (hydraulic bearing release assembly & mounting base) to have a height of 2.850" - 2.900" to provide the proper initial bearing clearance.

Height Adjustment Range Table

Hydraulic Release Bearing

Mounting Base	61-600	61-601	61-602	61-603	61-604
61-610	2.79" - 3.51"	2.55" - 3.27"	2.88" - 3.60"	2.88" - 3.60"	2.62" - 3.34"
61-611	2.57" - 3.29"	2.33" - 3.05"	2.66" - 3.38"	2.66" - 3.38"	2.39" - 3.11"
61-612	3.28" - 4.00"	3.04" - 3.76"	3.37" - 4.09"	3.37" - 4.09"	3.10" - 3.82"
61-613	2.84" - 3.56"	2.60" - 3.32"	2.93" - 3.65"	2.93" - 3.65"	2.66" - 3.38"
61-613M	2.84" - 3.56"	2.60" - 3.32"	2.93" - 3.65"	2.93" - 3.65"	2.66" - 3.38"
61-614	2.84" - 3.56"	2.60" - 3.32"	2.93" - 3.65"	2.93" - 3.65"	2.66" - 3.38"
61-615	2.78" - 3.50"	2.54" - 3.26"	2.87" - 3.59"	2.87" - 3.59"	2.60" - 3.32"
61-616	2.83" - 3.55"	2.59" - 3.31"	2.92" - 3.64"	2.92" - 3.64"	2.65" - 3.37"
61-616F	2.83" - 3.55"	2.59" - 3.31"	2.92" - 3.64"	2.92" - 3.64"	2.65" - 3.37"
61-617	2.76" - 3.48"	2.52" - 3.24"	2.85" - 3.57"	2.85" - 3.57"	2.58" - 3.30"
61-618	2.95" - 3.67"	2.71" - 3.43"	3.04" - 3.76"	3.04" - 3.76"	2.77" - 3.49"
61-619	2.85" - 3.57"	2.61" - 3.33"	2.94" - 3.66"	2.94" - 3.66"	2.67" - 3.39"
61-620	2.71" - 3.43"	2.47" - 3.19"	2.80" - 3.52"	2.80" - 3.52"	2.53" - 3.25"
61-621	3.28" - 4.00"	3.04" - 3.76"	3.37" - 4.09"	3.37" - 4.09"	3.10" - 3.82"
61-622	2.87" - 3.53"	2.63" - 3.29"	2.96" - 3.62"	2.96" - 3.62"	2.69" - 3.37"
61-623	2.87" - 3.53"	2.63" - 3.29"	2.96" - 3.62"	2.96" - 3.62"	2.69" - 3.35"
61-625	2.78" - 3.50"	2.54" - 3.26"	2.87" - 3.59"	2.87" - 3.59"	2.60" - 3.32"

See page 48 for replacement and optional release bearing assembly pistons.

Hydraulic Release Bearing Assemblies

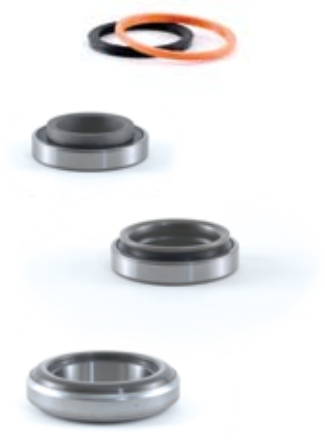
Clutch Type	Bearing Contact Diameter	Part Number
4.5" - 5.5" Tilton	1.50" (38mm)	61-603
7.25" Tilton	1.73" (44mm)	61-602
8.5" Tilton; 4.5" - 7.25" non-Tilton	2.05" (52mm)	61-600
8.5" - 10.5" Bent Finger & Lever-Type	1.68" - 2.60" (47mm - 66mm)	61-601
11" & larger Bent Finger & Lever-Type	1.68" - 3.30" (47mm - 84mm)	61-604

Mounting Base

Transmission	Application	Part Number
Borg-Warner/Tremec T5, 5-spd	GM	61-615
Borg-Warner/Tremec T5 (2.567" OD front input shaft bearing)	Ford	61-612
Borg-Warner T10 & Super T10 (1965-on)	GM	61-614
Chrysler A833 (1" x 23 spline input shaft)	Mopar	61-617
Ford 4-speed (1 3/8" x 10 spline input shaft)	Ford	61-619
Jerico (3.345" OD front input shaft bearing)	GM	61-616
Jerico (3.545" OD front input shaft bearing)	GM	61-622
Jerico (3.345" OD front input shaft bearing)	Ford	61-616F
Jerico (3.545" OD front input shaft bearing)	Ford	61-623
Lenco	GM	61-620
Muncie	GM	61-611
Richmond/Doug Nash 5 & 6-spd	GM	61-613
Richmond/Doug Nash 5 & 6-spd	Mopar	61-613M
Saginaw 3 & 4-spd	GM	61-610
Toploader 3 & 4-spd (1 1/16" x 10 spline input shaft)	Ford	61-618
Tremec 3550/TKO/600RR	GM	61-625
Tremec 3550/TKO/600RR	Ford	61-621
Universal, non-finished base can be modified by customer	Universal	62-600PF

Service Parts

Description	Part Number
Seal kit	62-905
Replacement bearing, 38mm contact diameter, radius face	62-008
Replacement bearing, 44mm contact diameter, radius face	62-031
Replacement bearing, 52mm contact diameter, radius face	62-002
Replacement bearing, 47-66 mm contact diameter, flat face	62-616
Thrust ring, enlarges P/N 62-616 contact diameter to 84mm	62-6161
Retaining ring, for use with P/N 62-6161	62-6162
Hydraulic line, braided, AN4, 90", two female fittings	62-564
Fitting, banjo (complete)	62-519
O-ring, replacement for banjo fitting	62-511-3
Fitting, AN4, female, supply & bleed	62-516
Bleedscrew, AN4	62-912
Lock-O-Seal (washer & o-ring)	62-551

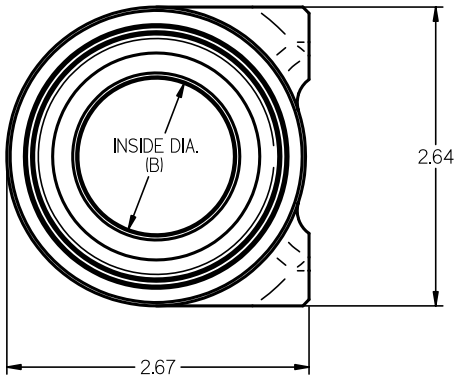


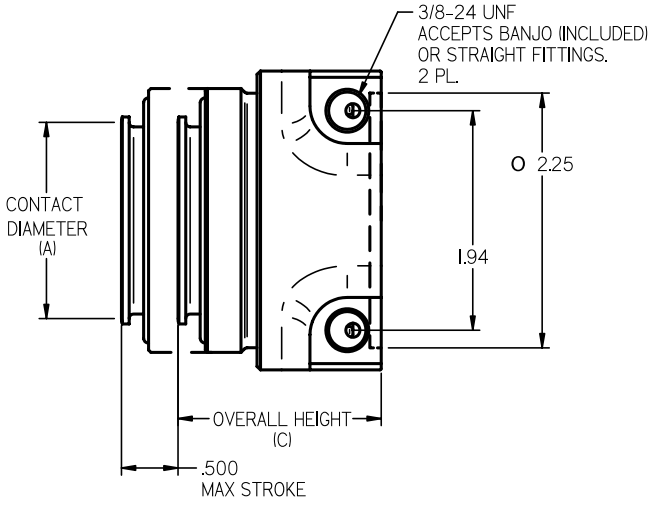
Typical application: Slip fit over transaxle pilot tube
Mount: Slip fit onto 1.375" (35mm) pilot tube
Material: Billet aluminum body and piston
Piston area: 1.221 in^2 (788mm^2)
Maximum stroke: .500" (12.7mm)
Ports: AN3 (3/8"-24)
Weight: .70 lbs (varies by part number)
Includes: AN3 steel braided line (90") and related fittings

Clutch Type	Part Number	Contact Diameter (A)	Inside Diameter (B)	Overall Height (C)
4.5" - 5.5" Tilton	61-778	1.50" (38mm)	1.26" (32.0mm)	1.70" (43.2mm)
7.25" Tilton	61-772	1.73" (44mm)	1.38" (35.1mm)	1.64" (78.8mm)
8.5" Tilton; 4.5"-7.25" non-Tilton	61-770	2.05" (52mm)	1.26" (32.0mm)	1.68" (42.7mm)

Service Parts

Description	Part Number
Seal kit	62-905
Replacement bearing, 38mm contact diameter, radius face	62-008
Replacement bearing, 44mm contact diameter, radius face	62-031
Replacement bearing, 52mm contact diameter, radius face	62-002
Hydraulic line, braided, AN3, 90", 90 degree banjos	62-565
Banjo bolt, AN3, includes washers	62-520
Fitting, AN3, female, straight	62-515
Fitting, AN3, female, bleed	62-543
Bleedscrew, AN3	28696





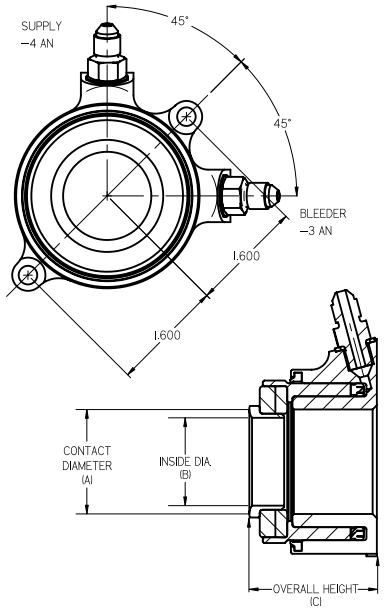
See page 48 for replacement and optional release bearing assembly pistons.

Typical Application: Applications that require a very low profile assembly. Mounts onto transmission/bellhousing (typically with an adapter).
Mount: 2-bolt
Material: Billet aluminum body and piston
Piston area: 1.221 in^2 (788mm^2)
Maximum stroke: Varies by part number
Ports: AN3 (3/8"-24)
Weight: .70 lbs (varies by part number)
Includes: Supply and bleed port fittings

Clutch Type	Bearing Contact Diameter (A)	Overall Height (C)	Stroke	Part Number
4.5" - 5.5" Tilton	38mm	1.39" (35.3mm)	.500" (12.7mm)	61-8113
4.5" - 5.5" Tilton	38mm	1.44" (36.6mm)	.500" (12.7mm)	61-8123
4.5" - 5.5" Tilton	38mm	1.60" (40.6mm)	.650" (16.5mm)	61-8003
4.5" - 5.5" Tilton	38mm	1.83" (46.5mm)	.700" (17.8mm)	61-803
4.5" - 5.5" Tilton	38mm	1.96" (49.8mm)	.700" (17.8mm)	61-8103
4.5" - 5.5" Tilton	38mm	2.08" (52.8mm)	.700" (17.8mm)	61-853
4.5" - 5.5" Tilton	38mm	2.14" (54.4mm)	.700" (17.8mm)	61-813
4.5" - 5.5" Tilton	38mm	2.32" (58.9mm)	.700" (17.8mm)	61-893
4.5" - 5.5" Tilton	38mm	2.42" (61.5mm)	.700" (17.8mm)	61-883
4.5" - 5.5" Tilton	38mm	2.55" (64.8mm)	.700" (17.8mm)	61-833
7.25" Tilton	44mm	1.44" (36.6mm)	.500" (12.7mm)	61-8122
7.25" Tilton	44mm	1.60" (40.6mm)	.650" (16.5mm)	61-8002
7.25" Tilton	44mm	1.88" (47.8mm)	.700" (17.8mm)	61-802
7.25" Tilton	44mm	1.96" (49.8mm)	.700" (17.8mm)	61-8102
7.25" Tilton	44mm	2.08" (52.8mm)	.700" (17.8mm)	61-852
7.25" Tilton	44mm	2.14" (54.4mm)	.700" (17.8mm)	61-812
7.25" Tilton	44mm	2.32" (58.9mm)	.700" (17.8mm)	61-822
7.25" Tilton	44mm	2.42" (61.5mm)	.700" (17.8mm)	61-882
7.25" Tilton	44mm	2.55" (64.8mm)	.700" (17.8mm)	61-842
8.5" Tilton; 4.5" - 7.25" others	52mm	2.04" (51.8mm)	.700" (17.8mm)	61-800
8.5" - 10.5" bent-finger & lever-type	47mm - 66mm	1.82" (46.2mm)	.700" (17.8mm)	61-801

Service Parts

Description	Part Number
Seal kit	62-905
Replacement bearing, 38mm contact diameter, radius face	62-008
Replacement bearing, 38mm, radius face, short insert (fits P/N 61-8113 & 61-803)	62-0085
Replacement bearing, 44mm contact diameter, radius face	62-031
Replacement bearing, 52mm contact diameter, radius face	62-002
Replacement bearing, 47-66 mm contact diameter, flat face	62-616
Thrust ring, enlarges P/N 62-616 contact diameter to 84mm	62-6161
Retaining ring, for use with P/N 62-6161	62-6162
Fitting, AN3, male, straight	TE2089-189
Fitting, AN3-to-AN4, male, straight	73-840



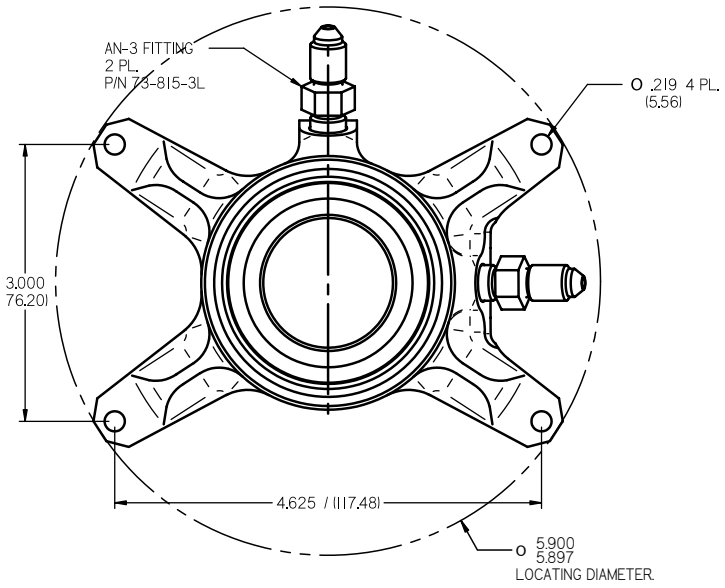
Typical Application: Direct mount into Tilton 52-Series magnesium and 53-Series aluminum & magnesium bellhousings.
Mount: 4-bolt (Tilton bellhousings)
Material: Billet aluminum body and piston
Piston area: 1.221 in^2 (788mm^2)
Maximum stroke: .700" (17.8mm)
Ports: AN3 (3/8"-24)
Weight: .92 lbs (varies by part number)
Includes: AN3 steel braided line (90") and related fittings

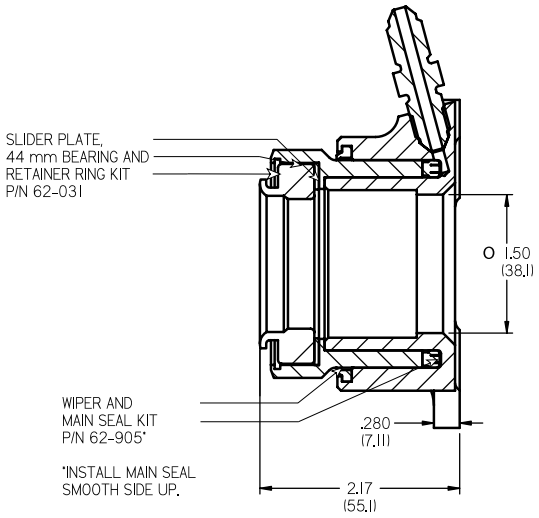
Bellhousing Type	Clutch Type	Part Number
52-Series Magnesium	5.5" 2-plate metallic	61-1563
52-Series Magnesium	5.5" 3-plate metallic	61-1543
53-Series Magnesium/Aluminum	7.25" 2-plate metallic	61-1512
53-Series Magnesium/Aluminum	7.25" 3-plate metallic	61-1502

Please see Driveline Packages section for additional applications.

Service Parts

Description	Part Number
Seal kit	62-905
Replacement bearing, 38mm contact diameter, radius face	62-008
Replacement bearing, 44mm contact diameter, radius face	62-031
Hydraulic line, braided, AN3, 90", two female fittings	62-563
Fitting, union, AN3, male	73-815-3L
Fitting, AN3, female, straight	62-515
Fitting, AN3, female, bleed	62-543
Bleedscrew, AN3	28696





See page 48 for replacement and optional release bearing assembly pistons.

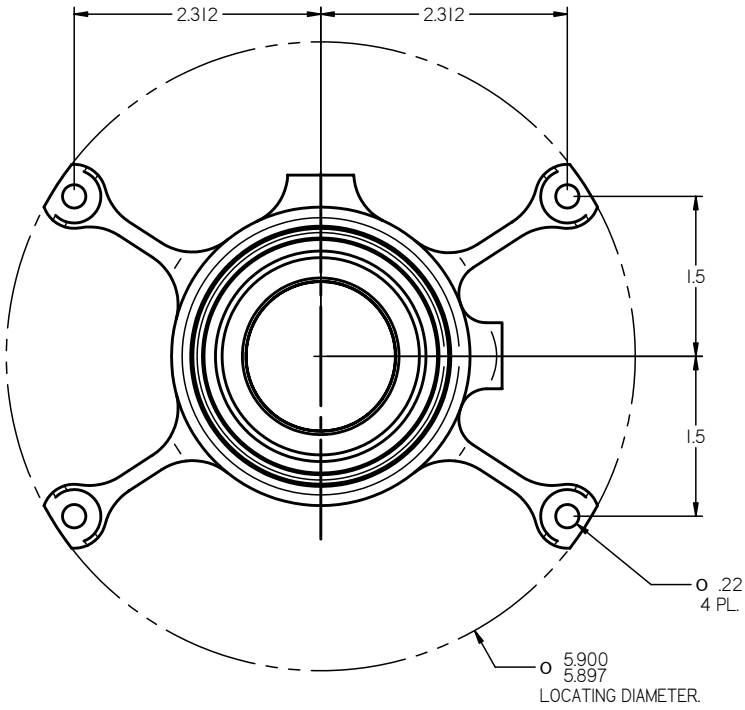
Features a positive stop to prevent over-stroking of the clutch.

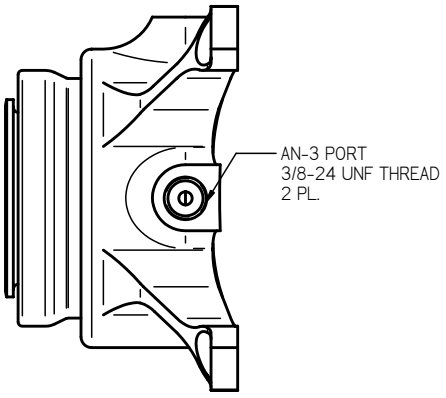
Typical Application: Direct mount into Tilton 52-Series aluminum and 53-Series aluminum & magnesium bellhousings.
Mount: 4-bolt (Tilton bellhousings)
Material: Billet aluminum body and piston
Piston area: 1.221 in^2 (788mm^2)
Maximum stroke: Limited by positive stop
Ports: AN3 (3/8"-24)
Weight: .80 lbs (varies by part number)
Includes: Supply and bleed port fittings

Bellhousing Type	Clutch Type	Part Number
52-Series Aluminum	7.25" 3-plate metallic	61-1612
53-Series Magnesium/Aluminum	7.25" 2-plate metallic	61-1612
53-Series Magnesium/Aluminum	7.25" 3-plate metallic	61-1602

Service Parts

Description	Part Number
Seal kit	62-905
Replacement bearing, 44mm contact diameter, radius face	62-031
Piston, .45" stroke, 1.330" overall length	62-1631
Piston, .49" stroke, 1.370" overall length	62-1641
Fitting, union, AN3, male	73-815-3L
Tool, positive stop removal	62-1690

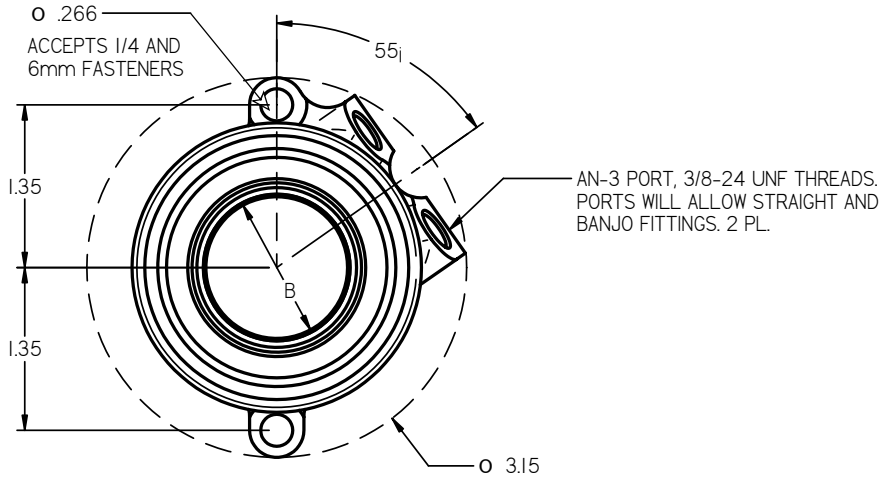


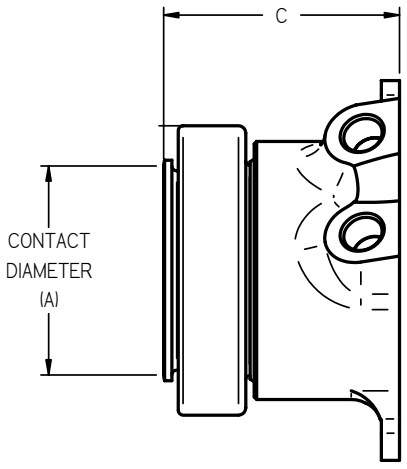


Typical Application: Applications that require a hydraulic release bearing with a reduced piston area, enabling the use of a 5/8" master cylinder (OE in many production cars) with a 7.25" clutch. Mounts onto transmission/bellhousing (typically with an adapter).
Mount: 2-bolt
Material: Billet aluminum body and piston
Piston area: .93 in^2 (600mm^2)
Maximum stroke: .600" (15.2mm)
Ports: AN3 (3/8"-24)
Weight: .56 lbs (varies by part number)
Includes: Supply and bleed port fittings

Clutch Type	Part Number	Contact Diameter (A)	Inside Diameter (B)	Overall Height (C)
7.25" Tilton	61-9002	1.73" (44mm)	1.18" (30.0mm)	1.95" (49.5mm)
7.25" Tilton	61-9012	1.73" (44mm)	1.18" (30.0mm)	2.02" (51.3mm)

Service Parts	
Description	Part Number
Seal Kit	62-9980
Replacement bearing, 44mm contact diameter, radius face	62-031
Fitting, union, AN3, male	73-815-3L





See page 48 for replacement and optional release bearing assembly pistons.

Self Centering Type Pistons (.835" engagement)

Pistons designed for use with Tilton self-centering bearings.
Fit 300, 400, 600 & 800-Series hydraulic release bearing assemblies.
.835" (21.2mm) piston engagement.

Inches	Millimeters	Part Number
1.440	36.6	62-6194
1.580	40.1	62-6195
1.640	41.7	62-619
1.730	43.9	62-6198
1.820	46.2	62-6192
1.870	47.5	62-6196
1.920	48.8	62-6191
1.990	50.5	62-6197
2.050	52.1	62-6193
2.140	54.4	62-619L

Self Centering Type Pistons (1.06" engagement)

Pistons designed for use with Tilton self-centering bearings.
Fit 1500-Series hydraulic release bearing assemblies.
1.06" (26.9mm) piston engagement.

Inches	Millimeters	Part Number
1.640	41.7	62-636
1.710	43.4	62-644
1.780	45.2	62-645
1.920	48.8	62-642
1.990	50.5	62-646
2.060	52.3	62-647
2.200	55.9	62-643

Press Fit Type Pistons (Outer Race Bearings)

Pistons designed for use with Tilton press fit (non-floating) bearings housed via the outer race. Fit 300, 400, 600 & 800-Series hydraulic release bearing assemblies.
.835" (21.2mm) piston engagement.

Inches	Millimeters	Part Number
1.185	26.6	62-687
1.260	32.0	62-681
1.340	34.0	62-684
1.829	46.5	62-673
1.910	48.5	62-671
2.026	51.5	62-675
2.107	53.5	62-676
2.205	56.0	62-670
2.286	58.1	62-677
2.380	60.5	62-672
2.670	67.8	62-674

Press Fit Type Pistons (Inner Race Bearings)

Pistons designed for use with Tilton press fit bearings housed via the inner race. Fit 300, 400, 600 & 800-Series hydraulic release bearing assemblies.
.835" (21.2mm) piston engagement.

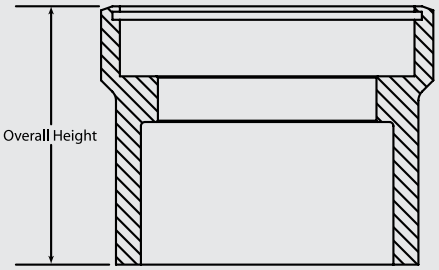
*For use with **Radius Face** bearings*

Inches	Millimeters	Part Number
1.530	38.9	62-612

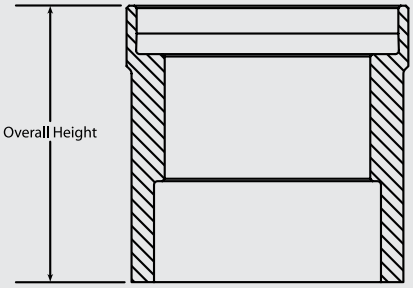
*For use with **Flat Face** bearings*

Inches	Millimeters	Part Number
1.420	36.1	62-620
1.920	48.8	62-620L

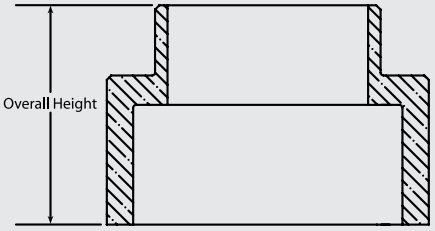
Self Centering Type



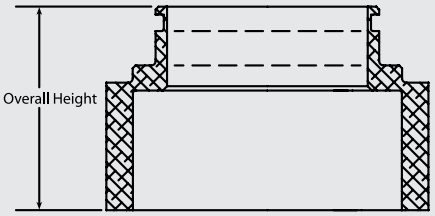
Press Fit Type Pistons
(Outer Race Bearings)



Press Fit Type Pistons
(Inner Race)-Radius Face Bearings

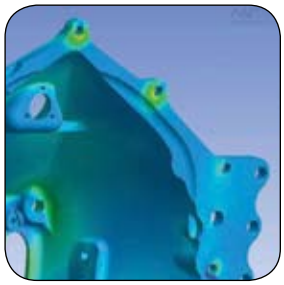


Press Fit Type Pistons
(Inner Race)-Flat Face Bearings



BELLHOUSINGS

Tilton bellhousing are engineered for the rigors of racing. Utilizing Finite Element Analysis (FEA) during design, each Tilton bellhousing is optimized for strength, stiffness and weight savings.

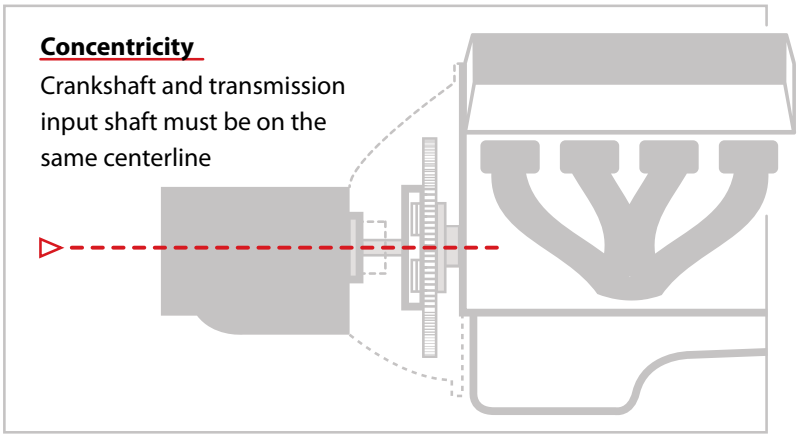


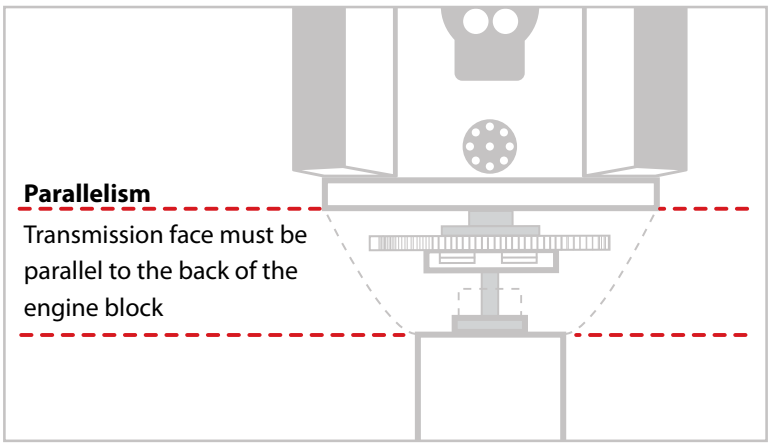
Rigidity

Tilton bellhousings do not sacrifice rigidity for weight savings. The high rigidity (stiffness) engineered into all Tilton bellhousings minimizes flex and insures that maximum power is transferred to the wheels and minimizes wear to driveline components.

Precision

Misalignment between the engine and transmission is a major cause of premature clutch failure and power loss. This is why all Tilton bellhousings are precision machined and blueprinted to be parallel and concentric with .005" Total Indicated Runout or less.





Features

Many Tilton bellhousings incorporate features such as integral mounting ears (with flanged inserts) for use as a rear engine mount, replaceable transmission register rings, threaded inserts and bulkhead mounted fittings for the hydraulic release bearing. Hydraulic release bearing mounts inside the bellhousing make transmission changes quick and easy.

52-Series 7.25" Aluminum Bellhousings

Aluminum bellhousing designed for use with Tilton 7.25" clutches, 110-tooth flywheels and rear-mount Super Starters. All applications are designed for transmissions with the GM mounting pattern and 4.68" register diameter. See page 55 for complete 52-Series 7.25" Aluminum driveline packages.

Description	Part Number
Bellhousing, Chevy, aluminum	52-701
Bellhousing, Dodge R5, aluminum	52-704
Bellhousing, Dodge R6, aluminum	52-709
Bellhousing, Ford, aluminum	52-702
Bellhousing, TRD, aluminum	52-706

Service Parts	
Description	**Part Number**
Insert, flanged, for rear engine mount ears	53-580
Fitting, AN3, bulkhead, for HRB lines	963203
Bolt kit, bellhousing-to-engine, Chevy/Dodge/TRD	95-200
Bolt kit, bellhousing-to-engine, Ford	95-201

52-Series UTGC Magnesium Bellhousings

Magnesium bellhousings designed for use with Tilton 4.5"/5.5" clutches, 102-tooth flywheels and rear-mount Super Starters. All applications are designed for transmissions with GM mounting pattern and 4.68" register diameter. See page 57 for complete 52-Series UTGC Magnesium driveline packages.

Description	Part Number
Bellhousing, Chevy, magnesium	52-501
Bellhousing, Dodge R3, magnesium	52-503
Bellhousing, Dodge R5, magnesium	52-504
Bellhousing, Ford, magnesium	52-502

Service Parts	
Description	**Part Number**
Register ring, Chevy (4.68")	53-550C
Bolt kit, bellhousing-to-engine, Chevy/Dodge R5	53-959
Bolt kit, bellhousing-to-engine, Chevy LS1/2/6/7	53-958
Bolt kit, bellhousing-to-engine, Dodge R3	53-981
Bolt kit, bellhousing-to-engine, Ford	53-966

53-Series OE Aluminum Bellhousings

Aluminum bellhousing designed for use with Tilton 7.25" clutches and 153-tooth flywheels. All applications are designed for transmissions with GM mounting pattern and 4.68" register diameter.

Description	Part Number
Bellhousing, Chevy, aluminum	53-601
Bellhousing, Dodge R5, aluminum	53-603
Bellhousing, Ford, aluminum	53-602

Service Parts	
Description	**Part Number**
Insert, flanged, for rear engine mount ears	53-580
Bolt kit, bellhousing-to-engine, Chevy/Dodge R5	53-959
Bolt kit, bellhousing-to-engine, Ford	53-966

53-Series OE Magnesium Bellhousings

Magnesium bellhousing designed for use with Tilton 7.25" clutches and 153-tooth flywheels. Unless noted, all applications are designed for transmissions with GM mounting pattern and 4.68" register diameter. See page 59 for complete 53-Series OE Magnesium driveline packages.

Description	Part Number
Bellhousing, Chevy, magnesium	53-501
Bellhousing, Dodge, magnesium	53-503
Bellhousing, Ford, magnesium	53-502C
Bellhousing, TRD, magnesium	53-506

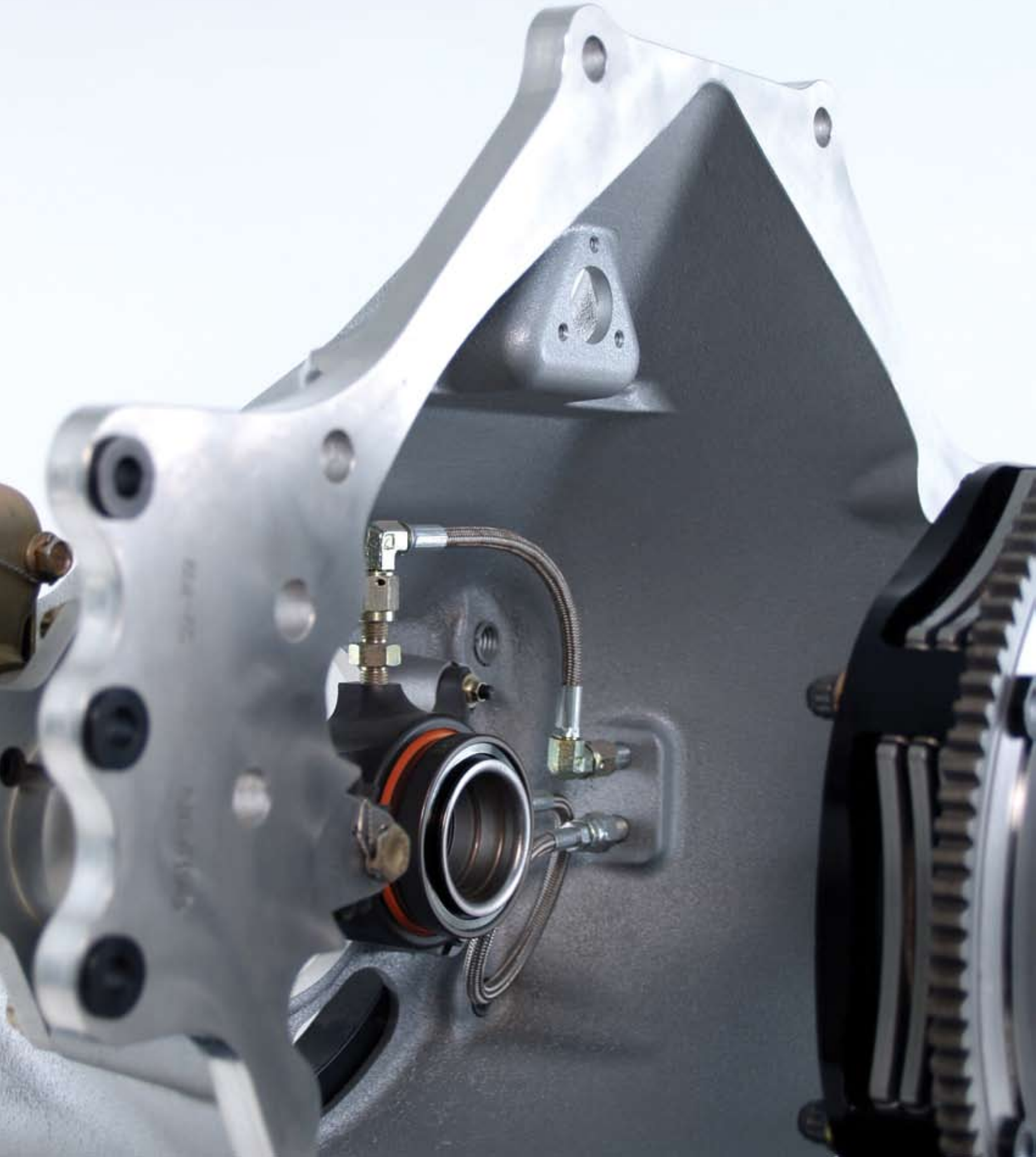
Service Parts	
Description	**Part Number**
Register ring, Chevy (4.68")	53-550C
Register ring, Ford (4.85")	53-550F
Insert, flanged, for rear engine mount ears	53-580
Bolt kit, bellhousing-to-engine, Chevy/Dodge R5	53-959
Bolt kit, bellhousing-to-engine, Ford	53-966

53-Series OE Steel Bellhousing

Steel bellhousing designed for use with 5.5"/7.25" clutches and 153-tooth flywheels/flexplates. Unless noted, all applications are designed for transmissions with GM mounting pattern and 4.68" register diameter.

Description	Part Number
Bellhousing, Chevy, steel	53-410
Bolt kit, bellhousing-to-engine	53-950

DRIVELINE PACKAGES



In 1992, Tilton Engineering introduced the concept of packaging matched components for use between the engine and transmission. The goal was to simplify the car building and parts ordering process. Prior to Tilton's introduction of the driveline package, race teams would spend considerable time sourcing components from various manufacturers. Many times, the various components would not function together properly. Tilton driveline packages are engineered as a complete system. Each component is designed to work with the others. As a result, Tilton driveline packages provide maximum performance, reliability and ease of installation. These fundamentals have made Tilton the choice of top race teams.

52-Series 7.25" Aluminum Packages

Typical Applications

Stock Cars (NASCAR Cup)
Road Racing

Features

Aluminum bellhousing
7.25" 3-plate metallic clutch
110-tooth (9.28") billet steel flywheel
Hydraulic release bearing with built-in positive stop
Super Starter (rear-mount)

52-Series UTGC Magnesium Packages

Typical Applications

Late Models
Modifieds
Stock Cars (ARCA Re/Max)
Road Racing (SCCA GT1)

Features

Magnesium bellhousing
4.5" or 5.5" (metallic or carbon) clutch
102-tooth (8.64") billet steel flywheel
Hydraulic release bearing
Super Starter (rear-mount)

53-Series OE Magnesium Packages

Typical Application

Stock Car:
NASCAR Busch/Truck
USAR Pro Cup

Features

Magnesium bellhousing
7.25" metallic clutch
153-tooth (12.84") billet steel flywheel
Hydraulic release bearing with built-in positive stop
Super Starter (stock location)

59-Series Silver Crown Packages

Typical Applications

USAC Silver Crown
Sprint

Features

Aluminum bellhousing
Billet aluminum output/release bearing housing for 4.25" or 4.5" ball
5.5" 3-plate metallic clutch
90-tooth (7.64") or Button (no ring gear) billet steel flywheel
Billet steel yoke shaft
Super Starter (rear-mount)

Tilton 52-Series 7.25" Aluminum Packages were designed specifically for the NASCAR "Car of Tomorrow". Being a fully modern design, these driveline packages incorporate the latest technology to provide maximum performance and reliability. 52-Series 7.25" Aluminum Packages are suitable for NASCAR Cup and any application that requires a rear-mount starter and 7.25" clutch.

Features

Bellhousing:

- » *Rigid aluminum bellhousing resists flexing, allowing maximum power to be transferred to the wheels and minimized wear to driveline components.*
- » *Integral mounting "ears", with flanged inserts, for use as a rear engine mount.*
- » *Bulkhead-mounted fittings for release bearing hydraulic lines.*
- » *Provisions for cam-driven fuel pump.*
- » *Blueprinted for parallelism and concentricity.*

Clutch-Flywheel-Assembly:

- » *7.25" OT-II clutch assembly provides race proven performance and reliability.*
- » *Clutch discs feature 8-rivet hub design for maximum attachment strength.*
- » *Billet steel 110-tooth (9.28") flywheel offers low inertia, precision balance and reliability.*
- » *Clutch mounting studs provide high strength and simplified clutch installation/removal.*

Hydraulic Release Bearing

- » *Built-in positive stop limits piston travel to prevent over-stroking of the clutch.*
- » *High temperature quad tensioner monoseal insures a leak resistant seal.*
- » *Superior materials and proprietary low friction coatings provide longevity and consistency.*
- » *High quality 44mm contact diameter bearing maximizes clutch modulation and provides reliable operation.*

Super Starter

- » *Several options available*: Compact Permanent Magnet (1.6 HP), Standard Duty (1.9 HP), and Severe Duty (3.0 HP).*
- » *Double Reduction Drop Gear design provides smooth engine cranking.*
- » *Safety-wired fasteners.*
- » *Reflective-type starter heat shield, designed to block radiant heat from headers, bolts directly to the starter (Permanent Magnet only).*

Driveline Packages

Includes: Bellhousing, flywheel, clutch, disc pack, positive stop hydraulic release bearing, PM Super Starter and related hardware.

Description	Chevy (E)	Chevy R07	Dodge R5	Dodge R6	Ford Sm Blk	Toyota
7.25" 3-plate, 1 5/32" x 26, PM Starter	52-2001	52-2003	52-2005	52-2012	52-2009	52-2007
7.25" 3-plate, 1 1/4" x 29, PM Starter	52-2002	52-2004	52-2006	52-2013	52-2014	52-2008

** Contact Tilton for details*
Note: (E) = Chevy V8 with 2-pc rear main seal

Bellhousings

Description	Part Number
Bellhousing, Chevy, aluminum	52-701
Bellhousing, Ford, aluminum	52-702
Bellhousing, Dodge R5, aluminum	52-704
Bellhousing, Dodge R6, aluminum	52-709
Bellhousing, Toyota, aluminum	52-706

Flywheels

Description	Part Number
Flywheel, Chevy (E), 110-tooth	51-6300
Flywheel, Chevy R07, 110-tooth	51-6310
Flywheel, Dodge R5/R6, 110-tooth	51-6310
Flywheel, Ford, 110-tooth	51-6320
Flywheel, Toyota, 110-tooth	51-6330

Clutches and Disc Packs

Description	Part Number
Clutch, 7.25" 3-plate	66-003HG
Disc pack, 7.25", 3 disc, 1 5/32" x 26 spline, 8-rivet	64185-4-VTV-36
Disc pack, 7.25", 3 disc, 1 1/4" x 29 spline, 8-rivet	64185-4-VTV-46

Hydraulic Release Bearing Assembly

Description	Part Number
HRB, positive stop, 7.25" 3-plate	61-1612
Replacement bearing, 44mm contact diameter	62-031
Replacement seal kit	62-905

Super Starter

Description	Part Number
Super Starter, 1.6 HP	54-61048
Super Starter, 1.9 HP (solenoid side position)	54-11047
Super Starter, 3.0 HP (solenoid side position)	54-21047
Super Starter, 1.9 HP (solenoid horizontal position)	54-11547
Super Starter, 3.0 HP (solenoid horizontal position)	54-21547
Heat shield, 1.6 HP starter only	54-615

Hardware Kits

Description	Part Number
Stud kit, clutch-to-flywheel, 7.25" 3-plate	95-100-6
Bolt kit, flywheel-to-crank, 6 bolts	95-975-6
Bolt kit, flywheel-to-crank, 8 bolts	95-975-8

52-Series UTGC packages are engineered to provide maximum ground clearance and performance. They offer an additional 2.2" of ground clearance over most OE bellhousings. The low inertia clutch-flywheel-assembly included in the package provides fast engine acceleration and deceleration. These features make 52-Series UTGC Packages ideal for short track (Late Models, Modifieds), circle track (ARCA) and road racing (GT, Trans Am) applications.

Features

Bellhousing:

- *» Rigid magnesium bellhousing resists flexing, allowing maximum power to be transferred to the wheels and minimizes wear to driveline components.*
- *» Replaceable transmission register ring.*
- *» Blueprinted for parallelism and concentricity.*

Clutch-Flywheel-Assembly:

- *» OT-Series (4.5" or 5.5") clutch assembly provides race proven performance and reliability.*
- *» Metallic and carbon clutch options available.*
- *» Billet steel 102-tooth (8.64") flywheel offers low inertia, precision balance and reliability.*

Hydraulic Release Bearing

- *» High temperature quad tensioner monoseal insures a leak resistant seal.*
- *» Superior materials and proprietary low friction coatings provide longevity and consistency.*
- *» High quality 38mm contact diameter bearing maximizes clutch modulation and provides reliable operation.*

Super Starter

- *» Rear-mount Severe Duty (3.0 HP) Super Starter*

Driveline Packages

Includes: Bellhousing, flywheel, clutch, disc pack, hydraulic release bearing, Super Starter and related hardware.

Description	Chevy (E)	Chevy (LS)	Dodge R3	Dodge R5	Ford Sm Blk
5.5" 2-plate metallic	52-11120	52-13120	52-17120	52-15120	52-12120
5.5" 3-plate metallic	52-11130	52-13130	52-17130	52-15130	52-12130
5.5" 2-plate carbon	52-11220	52-13220	N/A	N/A	52-12220
5.5" 3-plate carbon	52-11230	52-13230	N/A	N/A	52-12230
4.5" 3-plate metallic	52-11430	N/A	N/A	N/A	52-12430
4.5" 4-plate metallic	52-11440	N/A	N/A	N/A	52-12440
4.5" 3-plate carbon	52-11530	N/A	N/A	N/A	52-12530
4.5" 4-plate carbon	52-11540	N/A	N/A	N/A	52-12540

Note: (E) = Chevy V8 with 2-pc rear main seal
Note: (LS) = Chevy LS1/LS2/LS6/LS7
All packages are designed for use with transmissions that have a Chevy bolt pattern and 1 5/32" x 26 spline input shaft.

Bellhousings

Description	Part Number
Bellhousing, Chevy, magnesium	52-501
Bellhousing, Dodge R3, magnesium	52-503
Bellhousing, Dodge R5, magnesium	52-504
Bellhousing, Ford, magnesium	52-502

Flywheels

Description	Part Number
Flywheel, Chevy V8, 102-tooth, 5.5" metallic clutch	51-651
Flywheel, Chevy V8, 102-tooth, 5.5" carbon clutch	51-661
Flywheel, Chevy V8, 102-tooth, 4.5" clutches	51-645
Flywheel, Chevy LS, 102-tooth, 5.5" clutches	51-659
Flywheel, Dodge R3/R5 (Chevy crank), 5.5" clutches	51-651
Flywheel, Ford, 102-tooth, 5.5" clutches	51-653
Flywheel, Ford, 102-tooth, 4.5" clutches	51-640

Clutches and Disc Packs

Description	Part Number
Clutch, 5.5" 2-plate metallic	67-002HG
Clutch, 5.5" 3-plate metallic	67-003HG
Clutch, 5.5" 2-plate carbon (step-type)	6552USG-S
Clutch, 5.5" 2-plate carbon (pot-type)	6552USG-P
Clutch, 5.5" 3-plate carbon (step-type)	6553HSG-S
Clutch, 5.5" 3-plate carbon (pot-type)	6553HSG-P
Clutch, 4.5" 3-plate metallic	671-023HG
Clutch, 4.5" 4-plate metallic	671-024HG
Clutch, 4.5" 3-plate carbon	6513HSG-S
Clutch, 4.5" 4-plate carbon	6514HSG-S
Disc pack, 5.5", 2 disc, 1 5/32" x 26 spline	64140-9-AA-36
Disc pack, 5.5", 3 disc, 1 5/32" x 26 spline	64140-9-ABA-36
Disc pack, 4.5", 3 disc, 1 5/32" x 26 spline	64114-9-YYX-36
Disc pack, 4.5", 4 disc, 1 5/32" x 26 spline	64114-9-YYYX-36

Hydraulic Release Bearing Assembly

Clutch	Chevy (E)	Chevy LS	Dodge R3/R5	Ford
5.5" 2-plate metallic	61-1563	61-1553	61-1563	61-1563
5.5" 3-plate metallic	61-1543	61-1543	61-1543	61-1543
5.5" 2-plate carbon	61-1563	61-1553	N/A	61-1553
5.5" 3-plate carbon	61-1533	61-1503	N/A	61-1503
4.5" 3-plate metallic	61-1553	N/A	N/A	61-1563
4.5" 4-plate metallic	61-1533	N/A	N/A	61-1543
4.5" 3-plate carbon	61-1503	N/A	N/A	61-1533
4.5" 4-plate carbon	61-1573	N/A	N/A	61-1573

Super Starter

Description	Part Number
Super Starter, Severe Duty	54-21062

Hardware Kits

Description	Part Number
Bolt kit, flywheel-to-crank, Chevy V8/Dodge R3 & R5/Ford, 6 bolts	95-952-6
Bolt kit, flywheel-to-crank, Chevy LS, 6 bolts	95-940-6

Since their benchmark setting introduction in 1999, Tilton has continually developed 53-Series OE Magnesium Packages to provide increased performance and reliability. The most recent improvements to the packages include forged steel flywheels for increased service life and reliability, and positive stop hydraulic release bearing assemblies that are designed to prevent over-stroking of the clutch. 53-Series OE Magnesium Packages are suitable for most stock car racing series.

Note: Packages with an aluminum bellhousing are also available. Contact Tilton for further information.

Features

Bellhousing:

- *Rigid magnesium bellhousing resists flexing, allowing maximum power to be transferred to the wheels and minimized wear to driveline components.*
- *Integral mounting "ears" with flanged inserts, for use as a rear engine mount.*
- *Replaceable transmission register ring.*
- *Blueprinted for parallelism and concentricity.*

Clutch-Flywheel-Assembly:

- *7.25" OT-II clutch assembly provides race proven performance and reliability.*
- *Clutch discs feature 8-rivet hub design for maximum attachment strength.*
- *Forged steel 153-tooth (12.835") flywheel offers low inertia, precision balance and reliability.*
- *Clutch mounting studs provide high strength and simplified clutch installation/removal.*

Hydraulic Release Bearing

- *Built-in positive stop limits piston travel to prevent over-stroking of the clutch.*
- *High temperature quad tensioner monoseal insures a leak resistant seal.*
- *Superior materials and proprietary low friction coatings provide longevity and consistency.*
- *High quality 44mm contact diameter bearing maximizes clutch modulation and provides reliable operation.*

Super Starter

- *Standard Duty (1.9 HP) and XLT (1.6 HP) models available*

Driveline Packages

Includes: Bellhousing, flywheel, clutch, disc pack, positive stop hydraulic release bearing, Super Starter and related hardware.

Description	Chevy (E)	Dodge R5*	Ford Sm Blk
7.25" 3-plate, 1.9 HP Super Starter	53-1014	N/A	53-1018**
7.25" 3-plate, 1.6 HP XLT Super Starter	53-1015	53-1022	53-1019**
7.25" 2-plate, 1.9 HP Super Starter	53-1016	N/A	53-1020**
7.25" 2-plate, 1.6 HP XLT Super Starter	53-1017	52-1023	53-1021**
7.25" 2-plate, 1.9 HP Super Starter, lightened flywheel***	53-1028	N/A	53-1029‡
7.25" 2-plate, 1.6 HP XLT Super Starter, lightened flywheel***	53-1025	N/A	53-1027‡

** Dodge R5 with 8-bolt crank pattern*
*** Includes billet steel flywheel*
**** Includes flywheel with lightening holes (USAR Pro Cup legal)*
‡ Includes 61-1522 hydraulic release bearing and 64185-4-VT-36 disc pack
Note: (E) = Chevy V8 with 2-pc rear main seal
Note: All packages are designed for use with transmissions that have a Chevy bolt pattern and 1 5/32" x 26 spline input shaft.

Bellhousings

Description	Part Number
Bellhousing, Chevy, magnesium	53-501
Bellhousing, Dodge, magnesium	53-504
Bellhousing, Ford, magnesium	53-502C
Bellhousing, Toyota, magnesium	53-506

Flywheels

Description	Part Number
Flywheel, Chevy (E), 153-tooth, forged	51-6200
Flywheel, Chevy (E), 153-tooth, forged, lightened w/holes	51-6201*
Flywheel, Dodge R5 (8-bolt crank), 153-tooth, forged	51-6100
Flywheel, Ford, 153-tooth, billet	51-1208
Flywheel, Ford, 153-tooth, forged, lightened w/holes	51-1212*
Flywheel, Toyota, 153-tooth, billet	51-4061

Clutches and Disc Packs

Description	Part Number
Clutch, 7.25" 3-plate	66-003HG
Clutch, 7.25" 2-plate	66-002UGG
Disc pack, 7.25", 3 disc, 1 5/32" x 26 spline, 8-rivet	64185-4-VTV-36
Disc pack, 7.25", 2 disc, 1 5/32" x 26 spline, 8-rivet	64185-4-VV-36

Hydraulic Release Bearing Assembly

Description	Part Number
HRB, positive stop, 7.25" 3-plate, Chevy/Ford	61-1602
HRB, positive stop, 7.25" 3-plate, Dodge/Toyota	61-1612
HRB, positive stop, 7.25" 2-plate, Chevy/Ford	61-1622
Replacement bearing, 44mm contact diameter	62-031
Replacement seal kit	62-905

Super Starter

Description	Part Number
Super Starter, Chevy, 1.9 HP	54-10089
Super Starter, Chevy, 1.6 HP	54-50684
Super Starter, Dodge, 1.6 HP	54-50694
Super Starter, Ford, 1.9 HP	54-10083
Super Starter, Ford, 1.6 HP	54-50683

Hardware Kits

Description	Part Number
Stud kit, clutch-to-flywheel, 7.25" 3-plate, forged flywheels	95-100-6
Stud kit, clutch-to-flywheel, 7.25" 2-plate, forged flywheels	95-101-6
Bolt kit, clutch-to-flywheel, 7.25" 3-plate, billet flywheels	95-033
Bolt kit, clutch-to-flywheel, 7.25" 2-plate, billet flywheels	95-032
Bolt kit, flywheel-to-crank, 6 bolts	95-975-6
Bolt kit, flywheel-to-crank, 8 bolts	95-975-8

** Forged steel flywheel with lightening holes (USAR Pro Cup legal)*
Note: (E) = Chevy V8 with 2-pc rear main seal

59-Series Sprint Packages are primarily designed for applications that require driveline disengagement and/or self-starting abilities, such as the USAC Silver Crown cars. Packages are designed for use with 3/8" motor plates.

Features

Bellhousing/Output Housing:

- » *Compact aluminum bellhousing offers maximum ground clearance and foot room.*
- » *Billet aluminum output housings available for 4.25" and 4.5" torque balls. Includes yoke shaft and hydraulic release bearing.*
- » *Blueprinted for parallelism and concentricity.*

Clutch-Flywheel-Assembly:

- » *5.5" OT-III metallic clutch assembly provides race proven performance and reliability.*
- » *90-tooth and Button (no ring gear) flywheel options. Machined from billet 4140 steel for strength and reliability.*

Super Starter

- » *PMT (2.3HP) Super Starter rear-mounts onto bellhousing.*

Driveline Packages

Includes: Bellhousing, output housing, flywheel, clutch, disc pack, yoke shaft, Super Starter and related hardware.

Description	Chevy V8 Packages
Package with 5.5" 3-plate clutch, starter (4.25" ball)	59-705
Package with 5.5" 3-plate clutch, no starter (4.25" ball)	59-706
Package with 5.5" 3-plate clutch, starter (4.5" ball)	59-707
Package with 5.5" 3-plate clutch, no starter (4.5" ball)	59-708

Customer Profile

Car: C&R Silver Crown Chassis
Team: A.J. Foyt Racing
Series: USAC Silver Crown

Bellhousing

Description	Part Number
Bellhousing, aluminum	59-206

Output Housing

Description	Part Number
Output housing with yoke shaft, 4.25" ball	59-211
Output housing with yoke shaft, 4.5" ball	59-212
Yoke shaft	59-315
Release bearing	62-008
Release bearing piston	59-603
Release bearing piston seal	59-954

Flywheels

Description	Part Number
Flywheel, Chevy V8, 90-tooth	51-701
Flywheel, Chevy V8, no ring gear	50-701

Clutches and Disc Packs

Description	Part Number
Clutch, 5.5" 3-plate	67-003HG
Disc pack, 5.5", 3 disc, 1 5/32" x 26 spline	64140-9-ACC-36

Super Starter

Description	Part Number
Super Starter, PMT, 10-tooth pinion	54-31087

Hardware Kits

Description	Part Number
Bolt kit, clutch-to-flywheel, 5.5" 3-plate	95-003-5
Bolt kit, flywheel-to-crank, 6 bolts	95-952-6

Accessories

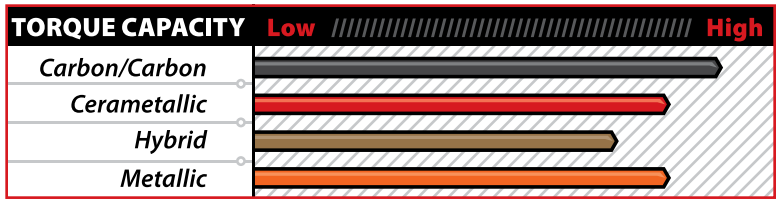
Description	Part Number
Power steering pump mount kit	59-520
Pump mount spacer, 1"	59-524

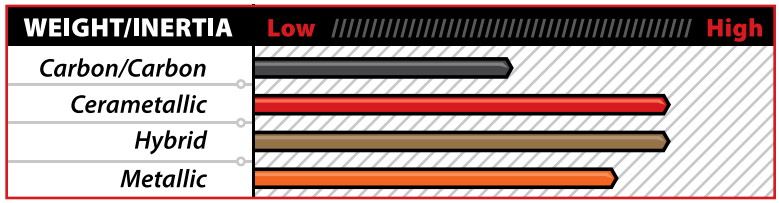
CLUTCH-FLYWHEEL ASSEMBLIES

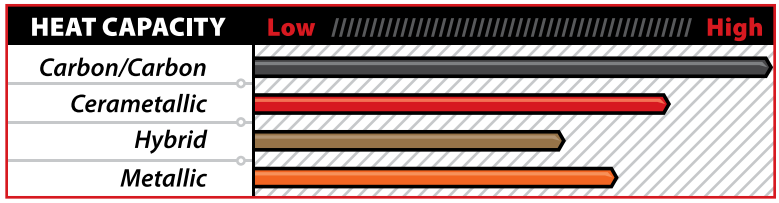
Tilton Engineering produces a range of clutch-flywheel-assemblies (CFA) for popular production-based cars. Tilton OE Diameter clutch-flywheel-assemblies are designed to be a direct replacement for the stock assemblies, retaining the same diameter (ring gear size) as originally equipped with the car.

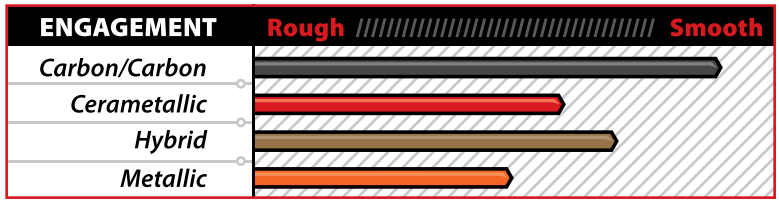
Clutch-flywheel-assemblies are available with four clutch options, making them suitable for most forms of racing and high-horsepower street/track applications. Clutch options include carbon, cerametallic, hybrid and sintered metallic.

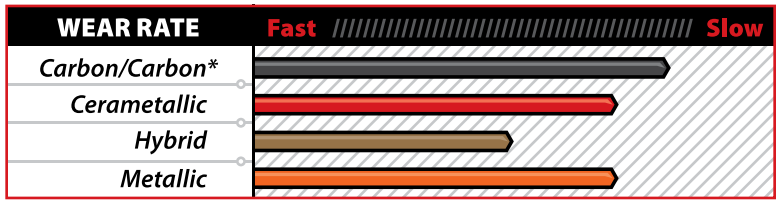
Clutch-flywheel-assemblies include a Tilton OT-Series clutch, disc pack, billet steel flywheel with integral ring gear. Some applications include a hydraulic release bearing assembly, which replaces the stock slave cylinder and related release bearing linkage.











*Long term life. Requires pressure plate/shim changes.

Assembly Includes:

- 5.5" or 7.25" carbon clutch
- Billet steel flywheel with integral ring gear
- Hydraulic release bearing*
- Aircraft quality hardware

** Most applications*

Benefiting from Tilton's 20+ years of carbon clutch development, Tilton carbon clutches are second to none in terms of quality and performance. Carbon clutch-flywheel-assemblies offer many features that make them ideal for racing and high-horsepower street/track applications.

The 100% carbon matrix plates utilized in the clutch provide smooth and linear engagement characteristics, a high heat capacity that enables the clutch to be slipped (modulated) without overheating/warping and have a very low inertia that improves shifting and transmission synchro life.

Tilton carbon clutches include additional pressure plate(s) that are designed to compensate for carbon plate wear and enable customers to service the clutch themselves. In addition, standard rebuilds of 7.25" carbon clutches are typically under $300.

						Service Parts		
Application	Plates #	Weight (lbs)	MOI (lb-in²)	Torque Capacity	CFA P/N	Clutch P/N	Flywheel P/N	HRB P/N
7.25" Clutch Package								
Chevy Corvette C5	3	14.3	237	1260	56-805	6573UGG-S12	51-4452	61-852
Chevy Corvette C6	3	14.3	237	1260	56-808	6573UGG-S12	51-4452	61-852
Dodge Viper (1992-2002)	3	18.9	393	1260	56-800	6573UGG-S12	51-822	61-721
Dodge Viper (1992-2002)	4	20.6	403	1400	56-809	6574HSGG-S	51-822	61-812
Honda B16A/B18 (92-on trans)	2	12.0	135	840	56-302	6572UGG-SDR	51-1160	Optional
Honda B16A/B18 (92-on trans)	2	16.0	205	840	56-302H	6572UGG-SDR	51-1166	Optional
Honda B16A/B18 (92-on trans)	2	12.0	135	360	56-310	6572UGN-SDR	51-1160	Optional
Honda B16A/B18 (90-91 trans)	2	12.0	135	840	56-303	6572UGG-SDR	51-1160	N/A
Honda H22	2	12.6	154	840	56-304	6572UGG-SDR	51-1170	N/A
Honda H22	2	12.6	154	360	56-312	6572UGN-SDR	51-1170	N/A
Honda K20/K24	2	12.3	152	840	56-311	6572UGG-SDR	51-1180	Optional
Honda S2000	2	14.2	175	840	56-313	6572UGG-S12	51-1190	61-8025
Mitsubishi EVO VII-IX	2	16.2	225	840	56-352	6572USGG-S12	51-4334	61-9002
Nissan 350Z	2	15.0	233	840	56-377	6572UGG-S12	51-4207	62-094
Nissan 350Z	3	16.1	242	1260	56-378	6573UGG-S12	51-4207	62-002-5
Porsche 993/996/997	3	14.3	181	1260	56-814	6573USGG-P12	51-4008	61-802
Subaru WRX/STI	2	16.9	252	840	56-372	6572USGG-S12	51-4122	61-732
Toyota Supra Turbo MKIV	3	20.1	260	1260	56-340802	6573UGG-S12	51-5021	61-342
Toyota Supra Turbo MKIV	4	21.7	270	1400	56-340804	6574HSGG-S	51-5021	61-392
5.5" Clutch Package								
Corvette C5*	3	10.6	136	750	57-805	6553HSG-S	51-4473	61-883
Corvette C6*	3	10.6	136	750	57-808	6553HSG-S	51-4473	61-883
Porsche 993/996/997	3	11.6	133	750	57-814	6553HSG-P	51-4011	61-803

** 153-tooth flywheel. Includes Super Starter P/N 54-10012.*

Optional Components	Part Number
Hydraulic release bearing kit; Honda B/K-Series, carbon clutch	61-7720**

*** Kit: Tilton 75-Series 3/4" master cylinder and mount bracket. Fits 1992-2001 Civic/Integra chassis.*

See page 27 (5.5") and 29 (7.25") for further information on carbon clutches.

Assembly Includes:

- 7.25" cerametallic clutch
- Disc pack
- Billet steel flywheel with integral ring gear
- Hydraulic release bearing*
- Aircraft quality hardware

** Some applications*

Tilton cerametallic clutch-flywheel-assemblies are primarily designed for racing and high-performance applications that require clutch slippage (modulation). When compared to Tilton sintered metallic clutch packages, the increased mass from the thicker cerametallic discs can withstand the higher temperatures generated during clutch modulation.

In addition, their engagement characteristics are smoother than Tilton sintered metallic clutches. These features have made cerametallic clutches popular for time attack, rally, club racing and street/track applications.

						Service Parts			
Application	Plates #	Weight (lbs)	MOI (lb-in²)	Torque Capacity	CFA P/N	Clutch P/N	Disc Pack P/N	Flywheel P/N	HRB P/N
Honda B16A/B18 (92-on trans)	2	14.6	161	740	56-300	66-302UG	64185-7-AA-38	51-1160	Optional
Honda B16A/B18 (92-on trans)	2	18.6	231	740	56-300H	66-302UG	64185-7-AA-38	51-1166	Optional
Honda B16A/B18 (92-on trans)	2	14.6	161	360	56-308	66-302UGN	64185-7-AA-38	51-1160	Optional
Honda B16A/B18 (90-91 trans)	2	14.6	161	740	56-301	66-302UG	64185-7-AA-38	51-1160	N/A
Honda B16A/B18 (90-91 trans)	2	14.6	231	360	56-301H	66-302UGN	64185-7-AA-38	51-1160	N/A
Honda H22	2	15.2	180	740	56-305	66-302UG	64185-7-AA-38	51-1170	N/A
Honda H22	2	15.2	180	360	56-307	66-302UGN	64185-7-AA-38	51-1170	N/A
Honda K20/K24	2	14.9	178	740	56-309	66-302UG	64185-7-AA-38	51-1180	Optional
Honda S2000	2	18.0	201	740	56-314	66-302UG	64185-7-AA-38	51-1190	61-8025
Mitsubishi EVO VII-IX	2	19.1	251	740	56-353	66-302UG	64185-7-AF-30H	51-4334	61-9012
Nissan 350Z	2	17.9	259	740	56-375	66-302UG	64185-7-AA-43	51-4207	62-094
Subaru WRX/STI	2	19.8	278	600	56-371	66-302UORA	64185-7-AA-47	51-4122	61-742

Optional Components

Description	*Part Number*
Hydraulic release bearing kit; Honda B/K-Series, cerametallic clutch	61-7770**
Hydraulic release bearing, modified OEM, Honda B/K-Series	62-010

*** Kit: Tilton 75-Series 3/4" master cylinder and mount bracket. Fits 1992-2001 Civic/Integra chassis.*

See page 17 for further information on cerametallic clutches.

Assembly Includes:

- 7.25" hybrid clutch
- Disc pack
- Billet steel flywheel with integral ring gear
- Hydraulic release bearing*
- Aircraft quality hardware

** Some applications*

Tilton hybrid clutch-flywheel-assemblies are primarily designed for high performance applications that require high torque capacity and "smooth" engagement characteristics. Hybrid clutches feature a durable 6-puck cerametallic disc and smooth engaging organic disc within one assembly.

The result is a clutch assembly that offers better drivability than 2-plate cerametallic clutches, but still provides a high torque capacity. The 7.25" diameter discs provide a lower inertia than OE-type clutches, providing more horsepower to the wheels and quicker shifting.

						Service Parts			
Application	Plates #	Weight (lbs)	MOI (lb-in²)	Torque Capacity	CFA P/N	Clutch P/N	Disc Pack P/N	Flywheel P/N	HRB P/N
Honda B16A/B18 (92-on trans)	2	14.6	161	620	56-300B	66-602HG	Cera - 64185-7-A-38 Organic - 64185-5-0038	51-1160	Optional
Honda B16A/B18 (92-on trans)	2	18.6	231	620	56-300HB	66-602HG	Cera - 64185-7-A-38 Organic - 64185-5-0038	51-1166	Optional
Honda H22	2	15.2	180	620	56-305B	66-602HG	Cera - 64185-7-A-38 Organic - 64185-5-0038	51-1170	N/A
Honda K20/K24	2	14.9	178	620	56-309B	66-602HG	Cera - 64185-7-A-38 Organic - 64185-5-0038	51-1180	Optional
Honda S2000	2	18.0	201	620	56-314B	66-602HG	Cera - 64185-7-A-38 Organic - 64185-5-0038	51-1190	61-8025
Mitsubishi EVO VII-IX	2	19.1	251	620	56-354	66-602HG	Cera - 64185-7-F-30H Organic - 64185-5-0030	51-4334	61-9012
Nissan 350Z	2	17.9	259	620	56-374	66-602HG	Cera - 64185-7-A-43 Organic - 64185-5-0043	51-4207	62-094
Subaru WRX/STI	2	19.8	278	620	56-373	66-602HG	Cera - 64185-7-A-47 Organic - 64185-5-0047	51-4122	61-742

Optional Components

Description	*Part Number*
Hydraulic release bearing kit; Honda B/K-Series, carbon clutch	61-7770**
Hydraulic release bearing, modified OEM, Honda B/K-Series	62-010

*** Kit: Tilton 75-Series 3/4" master cylinder and mount bracket. Fits 1992-2001 Civic/Integra chassis.*

See page 20 for further information on hybrid clutches.

Assembly Includes:

- 5.5" or 7.25" sintered metallic clutch
- Disc pack
- Billet steel flywheel with integral ring gear
- Hydraulic release bearing*
- Aircraft quality hardware

** Most applications*

Tilton sintered metallic clutch-flywheel-assemblies are primarily designed for road racing and time attack applications. Utilizing thin sintered metallic discs, these clutches are designed to offer a low moment-of-inertia and high torque capacity.

These features have made sintered metallic clutches the most common clutch type used in racing. Sintered metallic clutches are not recommended for street use.

						Service Parts			
Application	Plates #	Weight (lbs)	MOI (lb-in²)	Torque Capacity	CFA P/N	Clutch P/N	Disc Packs P/N	Flywheel P/N	HRB P/N
7.25" Clutch Packages									
Chevy Corvette C5	3	17.8	266	930	56-804	66-003HG	64185-2-ACC-36	51-4452	61-842
Chevy Corvette C6	3	17.8	266	930	56-807	66-003HG	64185-2-ACC-36	51-4452	61-842
Dodge Viper (1992-2002)	3	22.4	422	1260	56-801	66-003UGG	64185-2-ABA-36	51-822	61-711
Nissan 350Z	3	19.6	271	750	56-376	66-003HORA	64185-2-ACC-43	51-4207	62-094
Porsche 911 (915 trans)	2	14.4	181	500	56-806	66-012HORA	64185-2-AC-25	51-4024	61-8002
Porsche 993/996/997	2	15.4	188	500	56-813	66-012HORA	64185-3-AC-30	51-4008	61-832
5.5" Clutch Packages									
BMW E46 (323/325 trans)	2	11.1	95	500	57-810	67-002HG	64140-9-AB-10	51-3560	61-883
BMW E46 (323/325 trans)	3	12.4	106	750	57-811	67-003HG	64140-9-ACC-10	51-3560	61-813
Corvette C5*	3	13.5	154	750	57-804	67-003HG	64140-9-ACC-36	51-4473	61-833
Corvette C6*	3	13.5	154	750	57-807	67-003HG	64140-9-ACC-36	51-4473	61-833
Porsche 993/996/997	3	14.5	151	750	57-813	67-013HG	64140-3-ACC-30	51-4011	61-823

** 153-tooth flywheel. Includes Super Starter P/N 54-10012.*

See page 9 for further information on metallic clutches.

COMPONENTS & ACCESSORIES

Cooler Pump

Tilton cooler pumps are ideal for pumping oil through transmission and differential coolers. They can also be used for many other applications, such as emptying fuel tanks or circulating coolant. Pumps feature an internal bypass valve and are self-priming up to 8-ft above the source from which it draws. The Buna model is designed for standard oils and coolants. The Viton model is designed for more corrosive fluids, such as alcohol.

Description	Part Number
Cooler pump, Buna	40-524
Cooler pump, Viton	40-525

Specifications

- **Power:** 12-volt DC
- **Flow rate:** 1-2 GPM (varies by load)
- **Max pressure:** 60 PSI
- **Max temperature:** 265 F
- **Weight:** 3.5 lbs

Service Parts

Description	Part Number
Diaphragm kit with pistons, Buna	40-902
Diaphragm kit with pistons, Viton	40-912
Check valve assembly, Buna	40-934
Check valve assembly, Viton	40-935
Fan cover	40-910

Flow Control Valve

The Tilton flow control valve works by restricting the return flow of the hydraulic fluid by a tunable amount, reducing shock loads to the driveline by allowing the clutch to slip slightly during engagement. It does not restrict flow during release. Shock load is a result of an abrupt clutch engagement when the crankshaft and input shaft speeds are not precisely matched. The flow control valve is designed to reduce the risk of traction loss when downshifting and reduce the chance of damaging driveline components (broken axles, transmissions, etc). The valve works by restricting the return flow of the hydraulic fluid by a tunable amount.

Includes three orifice sizes (.021", .028" & .040") that enable clutch engagement to be tuned.

Description	Part Number
Flow control valve, AN3	90-5000

Clutch-to-Flywheel Stud Kits

Clutch-to-Flywheel stud kits designed to press fit into specific Tilton flywheels.

Description	Part Number
Stud kit, 7.25" 3-plate clutch	95-100-6
Stud kit, 7.25" 2-plate clutch	95-101-6

Flywheel-to-Crank Bolt Kits

Flywheel-to-Crank bolt kits designed for use with Tilton flywheels.

Size	Under Head Length	Socket Size	# of bolts	P/N
7/16"-20	.875"	1/2" 12-pt	6	95-952-6
7/16"-20	.875"	1/2" 12-pt	8	95-952-8
7/16"-20	.800"	3/4" 12-pt	6	95-975-6
7/16"-20	.800"	3/4" 12-pt	8	95-975-8
7/16"-20	1.00"	3/4" 12-pt	6	95-970-6
7/16"-20	1.00"	3/4" 12-pt	8	95-970-8
1/2"-20	.750"	3/4" 12-pt	6	95-958-6
1/2"-20	.750"	3/4" 12-pt	8	95-958-8
11mm x 1.5	.880"	1/2" 12-pt	6	95-940-6
12mm X 1.25	1.00"	3/4" 12-pt	6	95-980-6
12mm X 1.25	1.00"	3/4" 12-pt	8	95-980-8

Clutch-to-Flywheel Bolt Kits

Clutch-to-Flywheel bolt kits designed for Tilton clutches and flywheels, or any flywheel that has a flange thickness of .200". Kits includes aircraft-quality bolts, nuts and washers.

Metallic Clutch-to-Flywheel Bolt Kits

Clutch	# of Plates	Flywheel Type	Mounting Hole Type	Size	Under Head Length	Grip Length	P/N
4.5" Clutches							
4.5"	3	Step/Pot	Through	1/4"-28	2.058"	1.638"	95-050
4.5"	4	Step/Pot	Through	1/4"-28	2.308"	1.938"	95-051
5.5" Clutches							
5.5"	1	Step	Through	5/16"-24	1.72"	1.19"	95-001-5
5.5"	1	Step	Threaded	5/16"-24	1.47"	.938"	95-015
5.5"	2	Step/Pot	Through	5/16"-24	1.97"	1.44"	95-002-5
5.5"	2	Step	Threaded	5/16"-24	1.84"	1.31"	95-009-5
5.5"	2	Pot	Threaded	5/16"-24	1.72"	1.19"	95-010-5
5.5"	3	Step	Through	5/16"-24	2.34"	1.81"	95-019
5.5"	3	Pot	Through	5/16"-24	2.22"	1.69"	95-003-5
5.5"	3	Step	Threaded	5/16"-24	2.09"	1.56"	95-018
5.5"	3	Pot	Threaded	5/16"-24	1.97"	1.44"	95-002-5
5.5"	4	Step	Through	5/16"-24	2.59"	2.06"	95-004-5
5.5"	4	Pot	Through	5/16"-24	2.47"	1.94"	95-061
5.5"	4	Step	Threaded	5/16"-24	2.34"	1.81"	95-019
5.5"	4	Pot	Threaded	5/16"-24	2.22"	1.69"	95-003-5
7.25" Clutches							
7.25"	1	Step	Through	5/16"-24	1.47"	.938"	95-026
7.25"	1	Step	Threaded	5/16"-24	1.34"	.813"	95-009
7.25"	2	Step	Through	5/16"-24	1.84"	1.31"	95-017
7.25"	2	Pot	Through	5/16"-24	1.72"	1.19"	95-005
7.25"	2	Step	Threaded	5/16"-24	1.59"	1.06"	95-028
7.25"	2	Pot	Threaded	5/16"-24	1.47"	.938"	95-010
7.25"	3	Step	Through	5/16"-24	2.09"	1.56"	95-018
7.25"	3	Pot	Through	5/16"-24	1.97"	1.44"	95-006.
7.25"	3	Step	Threaded	5/16"-24	1.84"	1.31"	95-011
7.25"	3	Pot	Threaded	5/16"-24	1.72"	1.19"	95-014
7.25"	4	Step	Through	5/16"-24	2.34"	1.81"	95-008
7.25"	4	Pot	Through	5/16"-24	2.22"	1.69"	95-003-5
7.25"	4	Step/Pot	Threaded	5/16"-24	2.09"	1.56"	95-012

Cerametallic Clutch-to-Flywheel Bolt Kits

Clutch	# of Plates	Flywheel Type	Mounting Hole Type	Size	Under Head Length	Grip Length	P/N
5.5" Clutches							
5.5"	1	Step	Through	5/16"-24	1.72"	1.19"	95-001-5
5.5"	1	Step	Threaded	5/16"-24	1.59"	1.06"	95-029
5.5"	2	Step	Through	5/16"-24	2.22"	1.69"	95-003-5
5.5"	2	Step	Threaded	5/16"-24	1.97"	1.44"	95-002-5

7.25" Clutches

7.25"	1	Step	Through	5/16"-24	1.59"	1.06"	95-028
7.25"	1	Step	Threaded	5/16"-24	1.47"	.938"	95-010
7.25"	2	Step	Through	5/16"-24	2.09"	1.56"	95-018
7.25"	2	Step	Threaded	5/16"-24	1.84"	1.31"	95-011

8.5" Clutches

8.5"	1	Step	Through	5/16"-24	1.84"	1.31"	95-017
8.5"	1	Step	Threaded	5/16"-24	1.59"	1.06"	95-028
8.5"	2	Step	Through	5/16"-24	2.34"	1.81"	95-008
8.5"	2	Step	Threaded	5/16"-24	2.22"	1.69"	95-062

Carbon Clutch-to-Flywheel Bolt Kits

Clutch	# of Plates	Flywheel Type	Mounting Hole Type	Size	Under Head Length	Grip Length	P/N

5.5" Clutches

5.5"	1	Step/Pot	Through	5/16"-24	1.72"	1.19"	95-001-5
5.5"	1	Step	Threaded	5/16"-24	1.59"	1.06"	95-029
5.5"	1	Pot	Threaded	5/16"-24	1.47"	.938"	95-015
5.5"	2	Step	Through	5/16"-24	2.09"	1.56"	95-018
5.5"	2	Pot	Through	5/16"-24	1.97"	1.44"	95-002-5
5.5"	2	Step	Threaded	5/16"-24	1.84"	1.31"	95-009-5
5.5"	2	Pot	Threaded	5/16"-24	1.72"	1.19"	95-010-5
5.5"	3	Step	Through	5/16"-24	2.47"	1.94"	95-061
5.5"	3	Pot	Through	5/16"-24	2.34"	1.81"	95-019
5.5"	3	Step	Threaded	5/16"-24	2.22"	1.69"	95-003-5
5.5"	3	Pot	Threaded	5/16"-24	2.09"	1.56"	95-018
5.5"	4	Step	Through	5/16"-24	2.72"	2.19"	95-060
5.5"	4	Pot	Through	5/16"-24	2.59"	2.06"	95-004-5
5.5"	4	Step	Threaded	5/16"-24	2.47"	1.94"	95-061
5.5"	4	Pot	Threaded	5/16"-24	2.34"	1.81"	95-019

7.25" Clutches

7.25"	1	Step/Pot	Through	5/16"-24	1.72"	1.19"	95-020
7.25"	1	Step/Pot	Threaded	5/16"-24	1.47"	.938"	95-041
7.25"	2	Step	Through	5/16"-24	2.09"	1.56"	95-027
7.25"	2	Pot	Through	5/16"-24	1.97"	1.44"	95-023
7.25"	2	Step/Pot	Threaded	5/16"-24	1.84"	1.31"	95-063
7.25"	3	Step/Pot	Through	5/16"-24	2.47"	1.94"	95-016
7.25"	3	Step/Pot	Threaded	5/16"-24	2.22"	1.69"	95-025
7.25"	4	Pot	Through	5/16"-24	2.84"	2.31"	95-065
7.25"	4	Step	Threaded	5/16"-24	2.72"	2.19"	95-064
7.25"	4	Pot	Threaded	5/16"-24	2.59"	2.06"	95-042

Note: Step-type Flywheel = Clutch friction surface is .100" above clutch mounting surface

Note: Pot-type Flywheel = Clutch friction surface is equal to clutch mounting surface

Q. What is the allowable wear for Tilton metallic and cerametallic clutch discs?

A. Discs should be replaced in when total pack wear is .030" for 5.5" & 7.25" clutches and .020" for 4.5" clutches. 4.5", 5.5" and 7.25" sintered metallic discs start new at .104" thick. 7.25" cerametallic discs start new at .283" thick. 5.5" cerametallic discs start new at .236" thick.

Q. Why did the splines wear out of my clutch hubs prematurely?

A. The most common cause is an input shaft that is running at a slight angle relative to the crankshaft. Check to see that the transmission/bellhousing registers snugly on the locating dowel pins and that there is no dirt, burrs, or foreign matter between the transmission and engine mating surfaces. The bellhousing should be dialed in. Also verify that the input shaft is not bent. In addition, excessive engine vibration/ harmonics can cause rapid wear, as these harmonics can cause the clutch hubs to "beat" on the input shaft and wear. This is especially true on modified 4-cylinder engines.

Q. What do I torque my (5/16") clutch-to-flywheels bolts to?

A. 18 lb-ft with thread locking compound.

Q. Why do I have to set a clutch pedal stop?

A. The clutch pedal stop is designed to prevent over-stroking of the clutch and/or the hydraulic release bearing.
A clutch that is over-stroked will begin to reengage and could also be damaged. If the (Tilton) hydraulic release bearing is over-stroked, the piston and seal could extend outside of its main body.

Q. How do I determine where to set my clutch pedal stop?

A. The following is the procedure for setting a pedal stop:

1. Remove the pedal stop to bleed the system. Open the bleed screw, stroke the pedal its full travel, close the bleed screw, allow the pedal to return and repeat until all air has been removed from the system.
2. Raise the drive wheels off the ground and support the car on jack stands.
3. With the engine off and the car in gear, slowly depress the clutch pedal until the tires just barely break free.
4. Give the pedal an additional 1/4" of travel (measured at the foot pad) and lock the pedal stop in place.
   This will allow the clutch to cleanly release itself without damage.

Q. What master cylinder bore size do I need for my Tilton hydraulic release bearing?

A. Please reference the table located at the bottom of page 38.

Q. Can I purchase direct from Tilton?

A. All Tilton products are sold through our worldwide network of dealers. The only exception is custom products that are made-to-order. A complete Tilton dealer listing can be found at www.tiltonracing.com.

Q. Why is it critical to set the proper bearing clearance?

A. As your Tilton clutch wears the spring fingers move towards your transmission. If you do not allow for this to happen, the clutch will began to slip and eventually cause the clutch to fail.

Q. What is the difference between a step and pot style clutch?

A. A step-style clutch is defined by the presence of a .100" step for the friction surface of the flywheel, and is the most common type. The clutch registers with the inside of the clutch legs against the outside of the step. A pot-style clutch is a clutch with which the mounting surface and friction surface are the same. Pot-type clutches register on the outside diameter of the clutch cover.

Q. What type of bearing is required when using a Tilton Clutch?

A. A radius faced bearing must be used with all Tilton clutches; a flat faced bearing will not allow proper release and will damage the clutch.

Q. How much will a rebuild cost? How soon should I expect it back?

A. All Tilton components require different levels of attention when being rebuilt, so rebuild cost will depend on parts and time required. This will not be known until Tilton conducts a repair evaluation. You will need to call in and get a RMA # from our sales department [805.688.2353] before sending your parts in. The RMA helps us identify your package once it has arrived. After the clutch has been received it will go through a thorough evaluation process and you will be notified of the repair cost before any work is done. If you do not wish to pay the rebuild cost, we will simply ship the part back as we received it and not charge you anything for the inspection. Turn around will depend on other items in the shop ahead of yours and available parts.

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