IMPORTANT

YOUR NEW CENTERFORCE® CLUTCH ASSEMBLY AND FLYWHEEL HAVE BEEN DESIGNED TO BE USED WITH LOCATING DOWEL PINS.

THE ALIGNMENT DOWEL PINS ARE USED TO PROPERLY LOCATE THE PRESSURE PLATE TO THE FLYWHEEL FOR BALANCE PURPOSES AS WELL AS TO ADD PRESSURE PLATE TO FLYWHEEL SHEAR STRENGTH. THE ALIGNMENT DOWEL PINS SHOULD ALWAYS BE REPLACED IF THEY ARE DAMAGED, BROKEN OFF, OR MISSING FROM THE FLYWHEEL.

FAILURE TO INSTALL OR REPLACE THE DOWEL PINS AS REQUIRED MAY RESULT IN CLUTCH VIBRATION, IMPROPER CLUTCH OPERATION, AND POSSIBLE CLUTCH FAILURE WHICH MAY VOID THE WARRANTY!

CENTERFORCE THE PERFORMANCE CLUTCH®

CENTERFORCE DUAL FRICTION®

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Please follow these instructions in regards to the installation and use of your new Centerforce DFX

Flywheels: Be sure to install your new Centerforce DFX clutch on a clean and properly resurfaced or brand new flywheel. Centerforce recommends DFX to be used in conjunction with an aftermarket Billet Steel or Billet Aluminum (with steel insert) flywheel. Nodular Cast Iron OE flywheels are also approved. Gray Cast Iron OE flywheels are NOT recommended for use with Centerforce DFX (If you are unsure of what type of cast flywheel you have please call the tech office).

Break-In: The Centerforce DFX series clutch will perform best after a minimum 100-mile break-in period. Stop and go type driving is best for this procedure. Please do not apply full engine power or excessively slip the clutch during the break-in period. This period is required to properly seat the disc with the pressure plate and flywheel friction surfaces.

Centrifugal Weight System: If your new Centerforce DFX clutch is equipped with the patented Centerforce centrifugal weight system, do not remove the ring, weights or retaining spring wire that attaches the weight system to the clutch diaphragm fingers. If your Centerforce DFX clutch does not include the centrifugal weight system, it is because there is not sufficient clearance for Centerforce to safely and effectively install the centrifugal weight system for your application. In these cases Centerforce has made other, internal modifications to improve the clutch holding capacity.

Aftermarket Hydraulic Release Bearings: When using an aftermarket hydraulic release bearing it is important to check for proper clearance between the bearing and the centrifugal weight system. Some aftermarket hydraulic bearings have an anti-rotator pin that may come into contact with the centrifugal weight system.

Due to its positive engagement characteristics, the Centerforce DFX clutch is designed primarily for competition use. However, DFX can also be used in high-powered street or dual-purpose vehicles with excellent results. Please be advised that the increased holding capacity of this clutch can contribute to clutch chatter and/or cause an audible noise during operation.

Failure to follow the above procedures will void your warranty and may result in decreased performance and/or premature wear!

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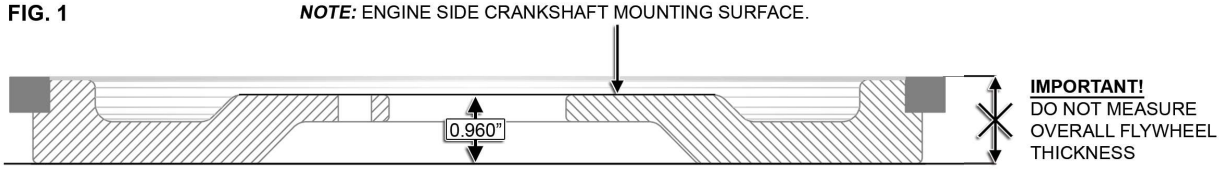
FORD MUSTANGS WITH CABLE CLUTCH LINKAGE

To help achieve proper cable clutch linkage geometry, you will need to measure your flywheel deck height (distance from the flywheel crankshaft flange surface to the clutch friction surface) as shown in FIG 1. Aftermarket flywheel variances and/or flywheel resurfacing may have reduced your flywheel deck height from the Original Equipment (O.E.) flywheel measurement of 0.960”.

FIG. 1



1. SET THE FLYWHEEL ON A FLAT SURFACE OR BENCH TOP WITH THE FRICTION SURFACE DOWN.
2. MEASURE DOWN THROUGH ONE OF THE CRANKSHAFT BOLT HOLES TO THE BENCH TOP.
3. RECORD AND SAVE THE FLYWHEEL DECK HEIGHT DIMENSION.

FIG 2 shows the O.E. clutch fork pivot ball height of 3.650” as measured from the engine block side of the Bellhousing plate (block saver) to the top of the clutch fork pivot ball. If your flywheel deck height measures between 0.910” and 0.960”, be sure your clutch fork pivot ball height is 3.650”. If your flywheel deck height is less than 0.910” you will need to adjust the clutch fork pivot ball height to accommodate the thinner flywheel as follows:

Enter your flywheel Deck Height measurement here:_____ and SUBTRACT from 0.960” (O.E. standard flywheel deck height) = “Pivot ball adjustment distance”.

Then: SUBTRACT “Pivot ball adjustment distance” from 3.650” (O.E. standard pivot ball height) to find the correct clutch fork pivot ball height.

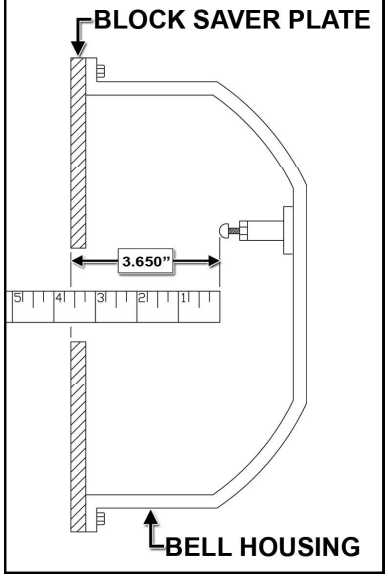
EXAMPLE: a flywheel deck height of 0.850” SUBTRACT from 0.960” = 0.110”

Use an aftermarket adjustable pivot ball to move the clutch fork pivot ball 0.110” CLOSER to the engine:

0.110” SUBTRACT from 3.650” = 3.540” (adjust the clutch fork pivot ball height to 3.540” in this example.)

These dimensions are for cable clutch release systems using Centerforce P/N: N1714 release (O.E. type) bearing. For use with other release bearings and/or if you have questions, please contact or Technical Department at: (928) 771-8422

FIG. 2



Notes:

1) If your flywheel deck height thickness is significantly below the O.E. specification, the clutch disc springs may contact the flywheel crankshaft bolts resulting in improper or failed clutch operation.

2) Centerforce DOES NOT recommend any shims/spacers or aftermarket balance plates to be used between the crankshaft and the flywheel.

PIVOT BALL REFERENCE INFORMATION

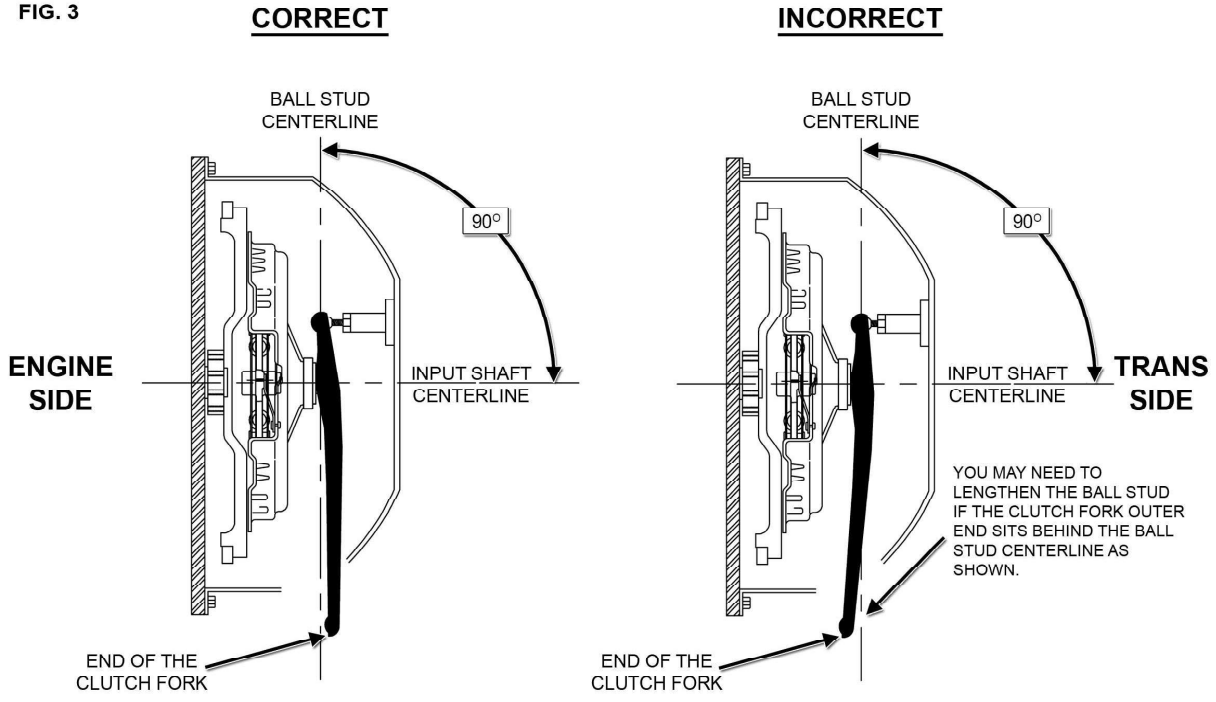
NON ADJUSTABLE	ADJUSTABLE PIVOT BALLS
FORD MOTOR CO.	LAKEWOOD / MR GASKET P/N: 15502 (Short Length)
P/N D5FZ-7B602A	LAKEWOOD / MR GASKET P/N: 15503 (Mid Length)
	McLEOD P/N: 16909

IMPORTANT

MECHANICAL CLUTCH LINKAGE GEOMETRY FINAL CHECK

Once the clutch assembly, release bearing, clutch fork and Bellhousing are bolted in place you can visually ensure the clutch fork ball stud is adjusted properly. Do not connect the remainder of the clutch linkage at this point. Move the clutch fork by hand until the release bearing contacts the clutch fingers. The outer end of the clutch fork should be pointed towards the transmission, behind the ball stud center as shown in FIG 3. If the outer end of the clutch fork is ahead of the ball stud centerline (pointing towards the engine), your clutch linkage is incorrect. Please re-visit the clutch fork pivot ball adjustment instructions or call the Centerforce Tech line at (928) 771-8422 for further assistance. Next, fully retract the release bearing away from the clutch fingers and visually check to insure that you have at least 1/4" clutch wear allowance gap between the release bearing and the clutch fingers. Once the geometry is correct, connect the remainder of the clutch linkage and then adjust to where the clutch engagement point is approximately half-way up the pedal travel. Small adjustments can be made to suit individual driving preferences. Throughout the service life of your clutch, be sure to periodically check the wear allowance gap and adjust as needed. Caution! If the clutch engagement point is at or near the top of your clutch pedal travel – your clutch may be pre-loaded (release bearing too close or touching the clutch fingers). Continued operation with the clutch in a pre-loaded condition will void the warranty and cause poor performance as well as significant damage.

FIG. 3



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IMPORTANT

Customers requiring 24-month SFI activation.

Thank you for purchasing clutch components certified by Centerforce to SFI Specification 1.1. Some competition sanctioning bodies require clutch components to be SFI certified every 24 months. The enclosed clutch component(s) contain the official SFI decal and corresponding serial number etched into the part. Please note that the component SFI ACTIVATION DATE is also etched near the SFI serial number. SFI 24-month certification STARTS from this SFI ACTIVATION DATE. Centerforce clutch components have an indefinite shelf life, however, due to the chain of commerce, the enclosed components may arrive to customers beyond this initial SFI ACTIVATION DATE. If you need full 24 months SFI certification to conform to competition rules, Centerforce can issue a new SFI serial number and SFI ACTIVATION DATE free of charge. To request a fresh SFI ACTIVATION DATE from Centerforce, you MUST contact Centerforce prior to installation and supply a copy of your proof of purchase. This request MUST be submitted within 30 days of purchase. If you require this service, please completely fill out the enclosed SFI activation form and return to Centerforce with a copy of your proof of purchase. Forms and receipts can be sent via Mail, Fax, or Email. If needed, SFI activation forms can also be obtained from our website: www.centerforce.com. Should you have questions or if you require further information please contact Centerforce customer service at (800) 932-5882. Information specifically about SFI certification can be found at www.sfifoundation.com (Reference SFI Clutch/Flywheel Specification 1.1).

IMPORTANT! This activation service is ONLY applicable to new components within 30 days of purchase. Centerforce components that have been SFI certified and used in competition MAY be eligible for re-certification but ONLY after the component(s) have been returned to Centerforce for inspection. Please obtain a Return Merchandise Authorization (RMA) number for inspection and re-certifications. Fee for this service may vary.

If you are NOT competing under specific sanctioning body rules, then the SFI activation date is not relevant to your application or your vehicle use. In this case feel free to use your Centerforce product regardless of the SFI activation date.

Ph: (800) 932-5882
Fax: (928) 771-8322
Email: sales@centerforce.com

EMAIL FORM

Centerforce Clutches
2266 Crosswind Dr.
Prescott, AZ 86301

Email Addres: _____

Full Name: _____ Date Purchased: _____

Street Address: _____ Part #: _____

City: _____ Current SFI #: _____

State: _____

Zip: _____

Country: _____

Phone: _____

Note: A copy of your receipt/proof of purchase is required to obtain an updated SFI Activation Date and SFI Number.

Please do not write below this line, completed by Centerforce!

New SFI #: _____

Date Certified: _____

Certifed By: _____

Keep this for your records once the SFI Label is affixed.

IMPORTANT

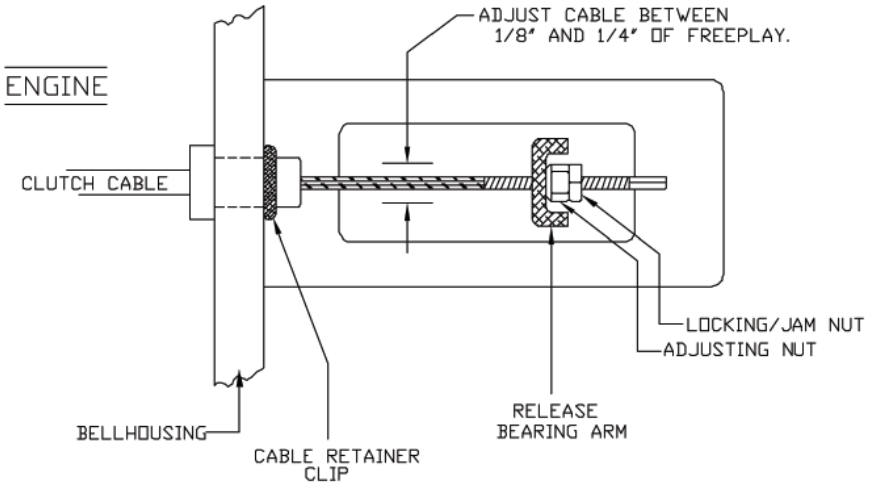
MUSTANG 5.0L AND 4.6L 1979-2004

CENTERFORCE RECOMMENDS THE FOLLOWING ADJUSTMENT PROCEDURES BE PERFORMED IMMEDIATELY AFTER THE NEW CLUTCH IS INSTALLED, (BEFORE ROAD TESTING), THEN AFTER THE 500 MILE BREAK IN PERIOD AND EVERY 3,000 TO 5,000 MILES THEREAFTER OR AS REQUIRED

CARS WITH THE STOCK RATCHET TYPE QUADRANT- AS DESCRIBED IN THE FACTORY SERVICE MANUAL, PROPER CLUTCH CABLE ADJUSTMENT IS ACCOMPLISHED BY SIMPLY PULLING UPWARD (TOWARDS THE DRIVERS SEAT) ON THE CLUTCH PEDAL (YOU MAY HEAR A CLICKING OR A RATCHETING SOUND FROM UNDER THE DASHBOARD). THIS WILL ALLOW THE QUADRANT PAWL TO RELEASE AND RESET THE CABLE ADJUSTMENT AUTOMATICALLY.

CARS WITH AN AFTER MARKET (ONE PIECE) ADJUSTABLE QUADRANT- (MANUAL ADJUSTMENT). MOVE THE CABLE ADJUSTING NUT (AT THE RELEASE BEARING ARM) TO OBTAIN 1/8" MINIMUM TO 1/4" OF FREEPLAY IN THE CABLE (SEE DIAGRAM). AT THIS SETTING THE CLUTCH SHOULD ENGAGE AT ONE THIRD TO ONE HALF OF THE PEDAL TRAVEL DISTANCE UP FROM THE FLOOR BOARD. IF THE ENGAGEMENT POINT DOES NOT FALL WITHIN THIS RANGE; LOOSEN THE ADJUSTING NUT (ADD SLACK TO THE CABLE) TO LOWER THE POINT OF ENGAGEMENT, OR THE OPPOSITE, TIGHTEN THE CABLE (MAKING SURE TO MAINTAIN THE PROPER FREEPLAY IN THE CABLE), TO RAISE THE ENGAGEMENT POINT UNTIL THE PROPER SETTING IS ACHIEVED. BE SURE TO LOCK THE CABLE ADJUSTING NUT WITH THE JAM NUT WHEN THE ADJUSTMENT IS COMPLETED.

ADJUSTMENT DIAGRAM FOR ADJUSTABLE QUADRANT



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IMPORTANT

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FORD CARS AND TRUCKS

1979-1997

ALL FORD TRANSMISSIONS WITH

ALUMINUM INPUT SHAFT RETAINER BEARING COLLAR

CLUTCH OPERATION PROBLEMS MAY OCCUR DUE TO THE INPUT SHAFT BEARING RETAINER COLLAR WEARING PREMATURELY, CAUSING THE THROWOUT BEARING TO BIND AND MISALIGN. THIS BINDING CAN RESULT IN ERRATIC CLUTCH OPERATION, INCLUDING HIGH PEDAL EFFORT, IMPROPER CLUTCH RELEASE OR ENGAGEMENT, OR CLUTCH CHATTER.

WHEN INSTALLING A NEW CLUTCH ASSEMBLY, IT IS IMPORTANT TO CHECK THE INPUT SHAFT BEARING RETAINER COLLAR, THE THROW OUT BEARING ARM, AND THE THROW OUT BEARING PIVOT BALL OR BRACKET FOR SIGNS OF WEAR. **IF THEY SHOW ANY SIGNS OF WEAR, THEY WILL NEED TO BE REPLACED.**

SOME OTHER SYMPTOMS OF A WORN INPUT SHAFT RETAINER BEARING COLLAR ON A HYDRAULIC SYSTEM OTHER THAN PREVIOUSLY MENTIONED, ARE CRACKING OF THE FIREWALL AROUND THE CLUTCH MASTER CYLINDER MOUNTING DUE TO FLEXING. THIS IS A COMMON OCCURRENCE ON LATE MODEL TRUCKS.

ON CABLE OPERATED SYSTEMS, IF THE INPUT SHAFT RETAINER BEARING COLLAR IS WORN, THE CLUTCH ADJUSTMENT MECHANISM MAY NOT PROPERLY OPERATE. THIS MAY CAUSE IMPROPER CLUTCH ADJUSTMENT, RESULTING IN IMPROPER RELEASE OR SLIPPAGE DUE TO THE ASSEMBLY NOT FULLY ENGAGING.

TO DETERMINE IF THE BEARING RETAINER COLLAR AND RELATED ITEMS ARE WORN AND NEED REPLACEMENT, CHECK FOR ANY SCORING OR WEAR THAT RUNS THE LENGTH OF THE RETAINER BEARING COLLAR OR WEAR THAT ENCIRCLES THE COLLAR. INSPECT THE CONTACT POINTS ON THE THROW OUT BEARING ARM WHERE THE THROW OUT BEARING MAKES CONTACT, THE SOCKET WHERE THE PIVOT BALL OR BRACKET PIVOTS IN THE THROW OUT BEARING ARM FOR UNEVEN WEAR OR GALLING. CHECK THE PIVOT BALL OR BRACKET FOR WEAR OR DAMAGE. **IF ANY ONE OF THE ITEMS ARE WORN, ALL OF THE PARTS SHOULD BE REPLACED AT THE SAME TIME (INPUT SHAFT RETAINER BEARING COLLAR, THROW OUT BEARING ARM, THROW OUT BEARING PIVOT BALL OR BRACKET, BUSHINGS, ETC.).**

WHEN REPLACING THE INPUT SHAFT BEARING RETAINER COLLAR, REMEMBER TO REPLACE THE INPUT SHAFT SEAL AND GASKET (WHERE APPLICABLE) TO AVOID ANY LEAKAGE AND ASSURE PROPER CLUTCH OPERATION.

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FOR ALL FORD MOTOR VEHICLES USING THROW OUT BEARING PART NUMBER N1714 OR O.E.M. TYPE EQUIVALENT DESIGN (PICTURED BELOW), WHICH IS A SELF ALIGNING TYPE THROWOUT BEARING.

NOTE: SELF ALIGNING TYPE THROWOUT BEARINGS WHEN REMOVED FROM THE BOX MAY APPEAR TO BE OFF CENTER, HOWEVER, THEY ARE NOT DEFECTIVE AND WILL PROPERLY ALIGN DURING USE.

THE FORK SPRING CLIPS MUST BE INSTALLED BETWEEN THE THROWOUT BEARING COLLAR FLANGES. IF THE CLIPS ARE INSTALLED ABOVE THE TOP FLANGE AS SHOWN BELOW, PROPER ADJUSTMENT CANNOT BE MADE.

CORRECT

INCORRECT

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