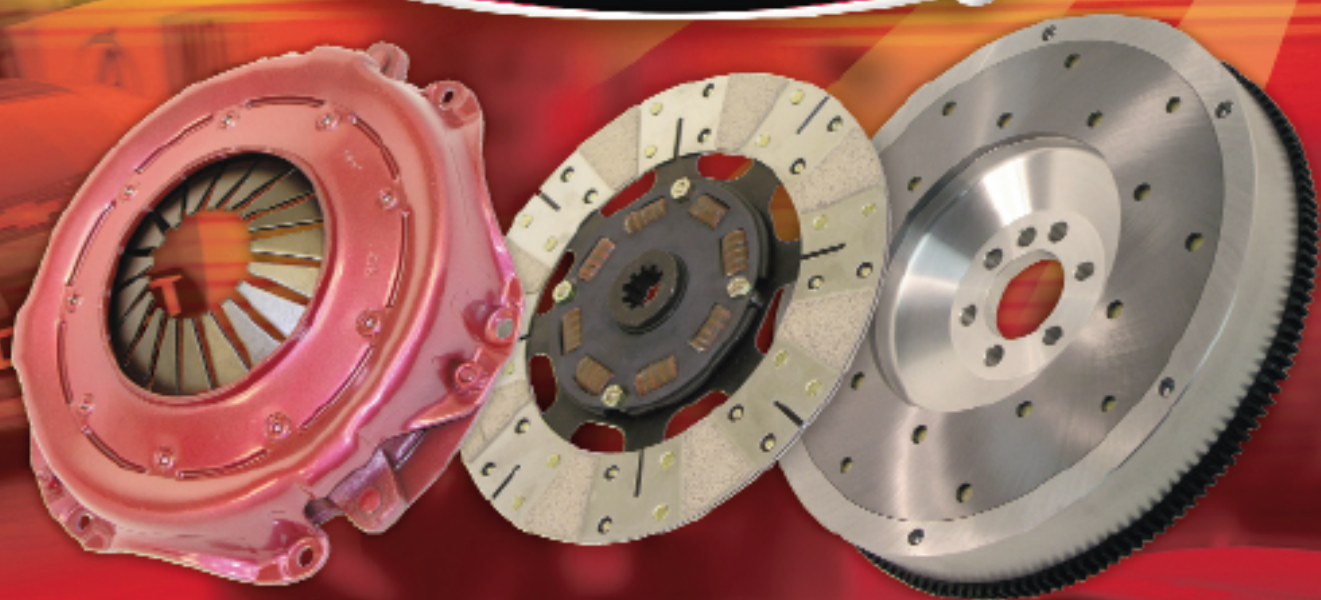


# RAM *Clutches*



**Clutch Components**  
**Drag Race      Car Builder**





# Pressure Plates



RAM performance pressure plates are engineered and built to meet the demands of high horsepower street and competition cars and trucks. These are not converted or modified factory stock pressure plates. Each unit features increased or adjustable static pressure, a ductile iron explosion resistant pressure ring, and is precision balanced to within 1/2 ounce/inch. Over 35 years of racing clutch development and manufacturing assure you that the clutch you select will meet your expectations.

## Long Style

The Long Style is the preferred pressure plate for competition. Each unit provides a combination of static and centrifugal pressure, and these characteristics enable the clutch to meet the car and track conditions. Long Style clutches provide additional pressure through centrifugal force of the levers against the pressure ring. Pressure plates are available in a variety of static pressures including adjustable static and counterweight to allow precise clutch tuning. All competition Long Style units feature a heavy cover with spring guides.

## Diaphragm

Diaphragm pressure plates are for street performance cars and trucks. These will provide the substantially increased clamp pressure necessary for high torque muscle car or crate motor street machines operating in a lower RPM range. RAM diaphragm clutches are approved for heavy-duty street and limited competition. For full race vehicles, please select RAM Long Style clutches with heavy duty covers..

## Borg & Beck

Borg & Beck clutches are best suited for heavy muscle cars and are exact duplicates of the original Mopar and AMC pressure plates. The 10.95 version uses a larger 11 inch pressure ring for more surface area and heat dissipation, and bolts up to a 10.5 inch clutch pattern for smaller bellhousings. For full race vehicles, please select HD cover RAM Long Style clutches.

SIZE	PRESSURE	APPLICATION NOTES	PN	BOLT CIRCLE	WEIGHT	BOLT SET	STUD SET	FLYWHEEL TOOTH COUNT
<b>GM DIAPHRAGM TYPE</b>								
10.4"	#2000	DUCTILE IRON PLATE	400	11.625	17	490	492	RAM GM 153,168
10.4"	#2900	DUCTILE IRON PLATE	401	11.625	17	490	492	RAM GM 153,168
10.4"	#2900	LIGHTWEIGHT ALUMINUM PLATE	801	11.625	13.5	490	492	RAM GM 153,168
10.4"	#2400	LT1 PULL TYPE	40082	11.625	18	USE OEM	-	RAM #2554, 2555
11"	#2900	EXC. LS1 FACTORY FLYWHEEL	402	12.625	18	490	492	RAM GM 168
11"	#2900	W/LS1 FACTORY FLYWHEEL*	402L	12.625	18	528	-	
*FACTORY FLYWHEEL MAY REQUIRE BALANCING TO NEUTRAL								
<b>FORD DIAPHRAGM TYPE</b>								
10"	#2400	DIAPHRAGM REPL 10.5 LEVER	4030*	11.375	16	493	-	RAM 157, 164
**10.5"	#2200	QUICK RELEASE KING COBRA	432	11.375	17	493	-	RAM 157, 164
10.5"	#2600	DUCTILE IRON PLATE	434	11.375	17	493	-	RAM 157, 164
11"	#2600	REPLACES 11.5" LEVER TYPE EXC. W/1 3/8" INPUT	431	12.375	20	484	-	RAM 164,176,184
12"	#2200	FORD BB EXC 1 3/8" INPUT	430*	12.875	20	491	-	RAM 176,184
* NOT FOR COMPETITION								
<b>GM AND MOPAR BORG &amp; BECK LEVER TYPE</b>								
10.5"	#2400	DUCTILE IRON PLATE	413	11.625	17	490	492	RAM GM 153,168,MOPAR 130,143
10.5"	#2800	DUCTILE IRON PLATE	403	11.625	17	490	492	RAM GM 153,168,MOPAR 130,143
10.5"	#3200	DUCTILE IRON PLATE	423	11.625	17	490	492	RAM GM 153,168,MOPAR 130,143
10.95"	#2400	DUCTILE IRON PLATE	408*	11.625	18	490	492	RAM GM 153,168,MOPAR 130,143
10.95"	#2800	DUCTILE IRON PLATE	418*	11.625	18	490	492	RAM GM 153,168,MOPAR 130,143
10.95"	#3200	DUCTILE IRON PLATE	428*	11.625	18	490	492	RAM GM 153,168,MOPAR 130,143
11"	#2400	DUCTILE IRON PLATE	444	12.625	18	490	492	RAM GM 168, MOPAR 143 TOOTH
11"	#2800	DUCTILE IRON PLATE	404	12.625	18	490	492	RAM GM 168, MOPAR 143 TOOTH
11"	#3200	DUCTILE IRON PLATE	414	12.625	18	490	492	RAM GM 168, MOPAR 143 TOOTH
* 490 BOLT SET REQUIRED FOR THIS INSTALLATION.								
<b>LONG STYLE FIXED PRESSURE</b>								
10.5"	#1800	5/16" MOUNTING HOLES	415	11.375	17	491	-	RAM FORD 157,164 EXC. 4.6L
10.5"	#2600	5/16" MOUNTING HOLES	405	11.375	17	491	-	RAM FORD 157,164 EXC. 4.6L
11"	#2000	HD COVER	439	12.375	18	490	492	RAM FORD 164,176,184, GM 168
11"	#2600	5/16" MOUNTING HOLES	406	12.375	18	491	-	OEM, RAM FORD
11"	#1800	HD COVER	440	12.375	19	490	492	RAM FORD 164,176,184, GM 168
11"	#2400	HD COVER	436	12.375	19	490	492	RAM FORD 164,176,184, GM 168
11"	#2400	HD COVER W/ CENTRIFUGAL	436CW	12.375	19	490	492	RAM FORD 164,176,184, GM 168
11"	#2800	HD COVER	437	12.375	19	490	492	RAM FORD 164,176,184, GM 168
11"	#2800	HD COVER W/ CENTRIFUGAL	437CW	12.375	19	490	492	RAM FORD 164,176,184, GM 168
<b>LONG STYLE FULLY ADJUSTABLE</b>								
11"	#1200-1800	W/ STATIC PRESSURE ADJUST.	435	12.375	19	490	492	RAM FORD 164,176,184, GM 168
		W/ STATIC & CENTRIFUGAL	435CW	12.375	19	490	492	RAM FORD 164,176,184, GM 168
11"	#1500-2100	W/ STATIC PRESSURE ADJUST.	448	12.375	19	490	492	RAM FORD 164,176,184, GM 168
		W/ STATIC & CENTRIFUGAL	448CW	12.375	19	490	492	RAM FORD 164,176,184, GM 168
11"	#1800-2400	W/ STATIC PRESSURE ADJUST.	438	12.375	19	490	492	RAM FORD 164,176,184, GM 168
		W/ STATIC & CENTRIFUGAL	438CW	12.375	19	490	492	RAM FORD 164,176,184, GM 168
11"	#2200-2800	W/ STATIC PRESSURE ADJUST.	458	12.375	19	490	492	RAM FORD 164,176,184, GM 168
		W/ STATIC & CENTRIFUGAL	458CW	12.375	19	490	492	RAM FORD 164,176,184, GM 168

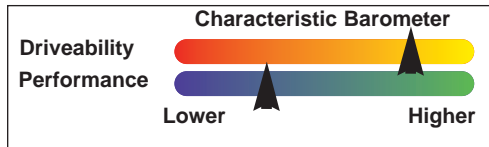
# Drag Race - Car Builder

## Clutch Discs

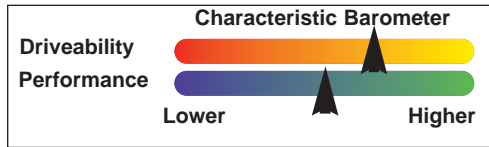
**HDX 200 SERIES DISCS** are designed for mild horsepower increases in vehicles that are street driven and where driveability is an important factor. Organic woven friction material and sprung hub dampening provide smooth engagement and a high level of driver comfort in operation. Use HDX discs with any RAM pressure plate in muscle car, hot rod, or other mildly tuned street vehicles.



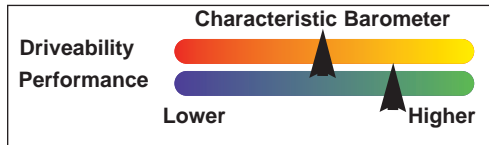
**COMPETITION 300 SERIES DISCS** meet the requirements of high RPM engines for street or competition use. High strength woven friction material is bonded to a steel backing plate to provide a high burst strength, smooth engagement, and long service life. Urethane encapsulated springs in an eight spring hub are more effective in absorbing high shock loads. Discs are available in a flat carrier ('300' competition) and marcel carrier ('300M' street/strip) versions. Use 300 series discs for street vehicles or racing applications requiring a softer engagement.



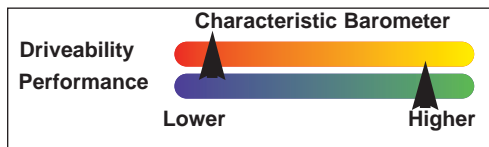
**POWERGRIP 900/300 SERIES DISCS** are a blend of organic 300 Series and 900 series metallic friction materials that retains all the good engagement characteristics of a full organic disc yet provides a substantial increase in torque capacity. Urethane encapsulated springs in an eight spring hub are more effective in absorbing high shock loads. Use Powergrip discs for higher horsepower or higher torque load vehicles where good driveability is a requirement.



**POWERGRIP 900 SERIES HD DISCS** are a full metallic friction material that offers a degree of smooth driveability unmatched by any other metallic disc. Urethane encapsulated springs in an eight spring hub are more effective in absorbing high shock loads. Use Powergrip 900 series discs for 'strip/street' vehicles when matched with the correct RAM pressure plate.



**RAMETALLIC 1000 AND 6000 SERIES DISCS** are the *original* '6 paddle disc'. Available in solid hub or with urethane encapsulated springs in an eight spring hub that is more effective in absorbing high shock loads. Use Rametallic discs for competition or very limited street applications.



SIZE & SPLINE	APPLICATION	200 SERIES	300 SERIES	300 SERIES RACE	300/900 POWERGRIP	900 POWERGRIP HD	1000 SERIES	6000 SERIES	ALIGNMENT TOOL
10.5" 1-23	FORD/MOPAR	203	303M	303	973	903	1023	6123	5309*
10.5" 1 1/16-10	FORD	205	305M	305	975	905	1025	6125	5304
10.5" 1 1/8-10	GM	201	301M	301	971	901	1021	6121	5301
10.5" 1 1/8-26	GM, FORD	209	309M	309	979	909	1029	6129	5313*
10.5" 1 3/16-18	MOPAR	207	307M	307	977	907	1027	6127	5382
10.5" 1 3/8-10	FORD	212	312M	312	982	912	1032	6132	5325
11" 1-23	FORD/MOPAR	204	304M	304	974	904	1124	6124	5309*
11" 1 1/16-10	FORD	206	306M	306	976	906	1126	6126	5304
11" 1 1/8-10	GM	202	302M	302	972	902	1122	6122	5301
11" 1 1/8-26	GM, FORD	210	310M	310	980	910	1130	6130	5313*
11" 1 3/16-18	MOPAR	208	308M	308	978	908	1128	6128	5382
11" 1 3/8-10	FORD	211	311M	311	981	911	1131	6131	5325
12" 1 1/8-10	GM	D4195	-	-	-	-	-	6142	5309
12" 1-23	MOPAR	D3946	-	-	-	-	-	-	5309*

\*TOOL NOT GUARANTEED TO MATCH YOUR PILOT BEARING





# True Balance Billet Flywheels



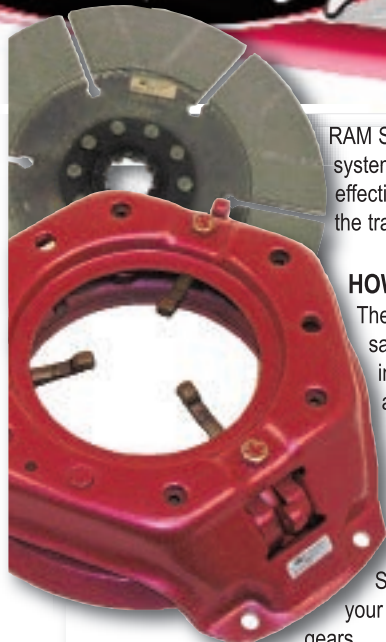
The flywheel accepts one half of the load of the clutch system. To realize the potential of the clutch system, the flywheel must be flat, parallel to the crankshaft flange, properly surface ground for maximum friction compatibility with the clutch disc, and balanced. Dyno testing proves that flywheel balance is critical to achieving maximum engine service. Every RAM flywheel is dynamically balanced to 1/2 ounce/inch of the factory specification. RAM aluminum flywheels have a .250 inch thick steel friction insert to handle the heat generated under extreme conditions, while allowing resurfacing without the need to replace the insert. All RAM flywheels are manufactured from SFI certified materials in our South Carolina facility.

ENGINE	YEARS	BAL.	RING GEAR	CLUTCH BOLT PATTERNS	NOTES	STEEL WT.	ALUM. WT.	BOLT SET			
<b>CHEVROLET</b>											
262-427	55	85	INT.	168	10.5",11" B&B, DIAPH., 11" LONG	FACTORY BALANCE	1501	33	2501	18	575
305-350	63	85	INT.	153	10.5" B&B, DIAPH.	FACTORY BALANCE	1511	26	2511	15	575
	55	85	EXT.	153	10.5" B&B, DIAPH.	'400' BALANCE	1515	26	1515A	-	-
	86	92	EXT.	168	10.5",11" B&B, DIAPH., 11" LONG	FACTORY BALANCE	1530	33	2530	18	575
	86	UP	INT.	168	10.5",11" B&B, DIAPH., 11" LONG	SPECIAL INTERNAL BALANCE	1531	33	2531	18	575
	86	UP	EXT.	153	10.5" B&B, DIAPH.	FACTORY BALANCE INCL. 400	1509	26	2509	15	575
350 LT1	93	97	EXT.	153	OEM PULL TYPE	LT1 F-BODY	-	-	2554	23	USE OEM
	55	85	INT.	153	OEM PULL TYPE	TO MATE EARLY BLOCK TO LT1 T56	-	-	2555	18	575
350 LS1	98	02	INT.	168	OEM, 11" DIAPHRAGM	LS1 F-BODY	1550	33	2550	18	528
400	70	78	EXT.	168	10.5",11" B&B, DIAPH., 11" LONG	ALSO 383 STROKER MOTOR	1523	33	2523	18	575
454	70	90	EXT.	168	10.5",11" B&B, DIAPH., 11" LONG	FACTORY BALANCE	1521	33	2521	18	575
LS2-LS7	05	10	INT.	168	FACTORY CLUTCH	STEP FLYWHEEL	-	-	2552	23	528
<b>CORVETTE (see above for 55-85)</b>											
350 LT1	89	96	EXT.	153	OEM PULL TYPE	REPLACES OEM DUAL MASS	-	-	2554	18	575
350 LS1	98	04	INT.	168	OEM, 11" DIAPHRAGM	LS1, LS6	1550	33	2550	18	528
LS2,LS3,LS7	05	10	INT.	168	11" DIAPHRAGM	FOR RAM CLUTCH ONLY	1550	33	2550	18	575
<b>CHRYSLER PRODUCTS</b>											
318-440	58	00	INT.	143	10.5",11" B&B, DIAPH., 11" LONG	6 BOLT CRANK PATTERN EXC.360*	1595	30	2595	18	575
	64	99	INT.	130	10.5" B&B, DIAPH.	6 BOLT CRANK PATTERN EXC.360*	1503	28	2503	17	575
318-440	64	99	INT.	130	10.5" B&B, DIAPH.	8 BOLT CRANK PATTERN EXC. 360*	1583	28	2583	17	596
426-440	63	69	INT.	143	10.5",11" B&B, DIAPH., 11" LONG	8 BOLT CRANK PATTERN	1593	30	2593	18	596
5.7L, 6.1L	08	09	INT.	130	10.5",11" B&B, DIAPH., 11" LONG	CHALLENGER	1585	30	2585	18	-
488	92	96	INT.	152	RAM 11" DIAPHRAGM	VIPER, RAM CLUTCH ONLY	-	-	2591	20	-
	97	03	INT.	143	RAM 11" DIAPHRAGM	VIPER, RAM CLUTCH ONLY	-	-	2590	18	-
	04	06	INT.	143	RAM 11" DIAPHRAGM	VIPER, RAM CLUTCH ONLY	-	-	USE 2590	18	-
* 360 ENGINE IS EXTERNAL BALANCE. SPECIAL ORDER ONLY.											
<b>FORD</b>											
221,239	38	48	INT.	112	10.5",11" B&B, DIAPH., 11" LONG	FLATHEAD (59AB)	1547	24	2547**	14	575
239,255	49	53	INT.	112	10.5",11" B&B, DIAPH., 11" LONG	FLATHEAD (8BA)	1549	24	2549**	14	575
289,302,351	65	85	EXT	164	10.5", 11" LONG, 10" DIAPH	28 OZ. BALANCE (FACTORY)	1505	33	2515	17	575
	65	85	INT.	164	10.5", 11" LONG, 10" DIAPH	SPECIAL INTERNAL BALANCE	1507	33	2516	17	575
	65	85	EXT	157	10.5" FORD DIAPH., 10.5" LONG	28 OZ. BALANCE (FACTORY)	1527	24	2527	14	575
	65	85	INT.	157	10.5" FORD DIAPH., 10.5" LONG	SPECIAL INTERNAL BALANCE	1529	24	2529	14	575
5.0L	11	UP	INT.	164	10.5",11" FORD DIAPH., 11" LONG	8 BOLT CRANK PATTERN	1545	26	2545	14	529
	86	95	EXT	157	10.5" FORD DIAPH., 10.5" LONG	50 OZ BALANCE (FACTORY)	1525	24	2525	14	575
289,302,351	86	95	EXT	157	10.5" FORD DIAPH., 10.5" LONG	SPECIAL 28 OZ. BALANCE	1527	24	2527	14	575
	86	95	INT.	157	10.5" FORD DIAPH., 10.5" LONG	SPECIAL INTERNAL BALANCE	1529	24	2529	14	575
	86	95	EXT	164	10.5", 11" LONG, 10" DIAPH	FOR 11" CLUTCH 50 OZ BAL.	1506*	33	2506	17	575
	86	95	EXT	164	10.5", 11" LONG, 10" DIAPH	FOR 11" CLUTCH 28 OZ BAL.	1505*	33	2505	17	575
	86	95	INT.	164	10.5", 11" LONG, 10" DIAPH	FOR 11" CLUTCH INTERNAL BAL.	1507*	33	2516	17	575
4.6L	96	07	INT.	164	10.5",11" FORD DIAPH., 11" LONG	6 BOLT CRANK PATTERN	1540	26	2540	14	529
			INT.	164	10.5",11" FORD DIAPH., 11" LONG	8 BOLT CRANK PATTERN	1545	26	2545	14	529
428	66	70	EXT.	184	11", ,11.5/12" LONG	28 OZ. BALANCE (FACTORY)	1518	35	2518+	20	575
390,429,460	69	78	INT.	176	11", ,11.5/12" LONG	INTERNAL BALANCE 176 TOOTH***	1519B	35	2519B+	20	575
			INT.	184	11", ,11.5/12" LONG	INTERNAL BALANCE 184 TOOTH***	1519	35	2519+	20	575
460	79	99	EXT	176	11", ,11.5/12" LONG	24.2 OZ BALANCE 176 TOOTH***	1517B	35	2517B+	20	575
			EXT	184	11", ,11.5/12" LONG	24.2 OZ BALANCE 184 TOOTH***	1517	35	2517+	20	575
* USE ON 5.0L ENGINE REQUIRES FORD STARTER FOZT-11002-B (Motrcraft SA776) AND AFTERMARKET SAFETY BELLHOUSING.											
** FLYWHEEL BOLT PLATE RAM #540 RECOMMENDED. REQUIRES RAM FORD STYLE 8 SPRING DISC											
*** FLYWHEELS INTERCHANGE											
+ 11" LONG STYLE PATTERN ONLY											
NOTE: 4.6L, 5.0L, & 351 APPLICATIONS USING METRIC DIAPHRAGM CLUTCH REQUIRE OEM 5.0L STEP DOWEL PIN SET OR RAM P/N 563 DOWEL PIN SET.											
<b>PONTIAC</b>											
173 (2.8L)	84	87	EXT.	142	9.125"/9.625" DIAPH.	FIERO V6	1571	15	2571	9	575
	88	INT.	142		9.125"/9.625" DIAPH.	FIERO V6	1570	15	2570	9	575
350 LS1	98	02	INT.	168	OEM, 11" DIAPHRAGM	LS1 F-BODY	1550	33	2550	18	528
326-455	64	76	INT.	166	10.5",11" B&B, DIAPH., 11" LONG	LARGE CRANK REGISTER ( 2.750")	1557	30	2557	16	-



# Drag Race

## Sportsman Single Disc Systems



RAM Sportsman single disc systems feature an adjustable Long Style pressure plate and a sintered iron disc. These systems provide the smooth, controlled launch that is critical to achieving the lowest elapsed time. The key to an effective competition clutch system is progressive engagement versus using only static holding power to maximize the traction applied to the drive wheels.

### HOW IT WORKS

The adjustable Long Style pressure plate provides two types of clamp pressure. Static pressure is constant; the same whether the engine is off or spinning 7000 RPM. Centrifugal pressure is applied by the clutch levers and increases as engine RPM increases. These pressures allow the clutch to be set so the car can be launched at a lower RPM than the shift point, and the clutch will slip enough to maintain traction for a smooth launch and then lock up as the engine RPM increases. Changing the launch RPM or altering the base pressure allows you to respond to changing track conditions on the starting line, while centrifugal weights on the levers will control how slowly or quickly the clutch will lock up through the gears.

### STARTING POINTS

Start with the maximum pressure setting for your pressure plate. Optimum launch is 2500-4000 RPM below your shift point. Static pressure controls the launch of the car, centrifugal pressure controls the clutch through the gears.

### SELECTING THE CORRECT SYSTEM COMPONENTS

- Select the correct flywheel for your engine from the flywheel listings in this brochure. Make sure you have a flywheel that has the Long Style pattern. Most drag racing applications should use aluminum flywheels.
- Select the correct pressure plate for your vehicle using the charts below.
- Select the correct clutch disc from the chart below.
- Select the correct release bearing from the listings on the following page.
- 492 stud set and 550 shim set required.

How much pressure do I need?			
If your engine is	And your car wt. is	And your peak rpm is	Use
Small block	less than 2600	less than 7000	471
Small block	more than 2600	less than 7000	471
Small block	less than 2600	more than 7000	470
Small block	more than 2600	more than 7000	470
Big block	less than 2600	less than 7000	471
Big block	more than 2600	less than 7000	473
Big block	less than 2600	more than 7000	471
Big block	more than 2600	more than 7000	473

Use 'CW' counterweighted models for clutchless transmissions.  
Over 8500 RPM applications use 470 or 470CW

APPLICATION	PN	
<b>RELEASE BEARINGS</b>		
GM cars, 10,26,18 spline	489	
Ford early clip on style 1 1/16-10	485	
Ford early clip on style, 1 3/8-10	486	
Ford late 1 1/16-10, 26 spline	487	
<b>DIAMETER/SPLINE</b>	<b>5135 COMPOUND</b>	<b>5191 COMPOUND</b>
<b>SINTERED IRON CLUTCH DISCS</b>		
10.5" 1-23	1354	1394
10.5" 1 1/16-10	1336	1385
10.5" 1 1/8-10	1364	1393
10.5" 1 1/8-26	1363	1386
10.5" 1 3/16-18	1358	1387

SIZE	PRESSURE	PN	DESCRIPTION	BOLT CIRCLE	LEVER HEIGHT	WT.	BOLT SET	STUD SET	FITS
<b>LONG STYLE PRESSURE PLATES FOR SINTERED IRON CLUTCH SYSTEMS</b>									
11"	360-1000#	470	W/ STATIC PRESSURE ADJUST.	12.375	2.4" - 2.8"	19	490	492	RAM FORD 164,176,184, GM 168 TOOTH
		470CW	W/ STATIC & CENTRUFUGAL ADJUST.	12.375	2.4" - 2.8"	19	490	492	RAM FORD 164,176,184, GM 168 TOOTH
11"	800-1400#	471	W/ STATIC PRESSURE ADJUST.	12.375	2.4" - 2.8"	19	490	492	RAM FORD 164,176,184, GM 168 TOOTH
		471CW	W/ STATIC & CENTRUFUGAL ADJUST.	12.375	2.4" - 2.8"	19	490	492	RAM FORD 164,176,184, GM 168 TOOTH
11"	1200-1800#	473	W/ STATIC PRESSURE ADJUST.	12.375	2.4" - 2.8"	19	490	492	RAM FORD 164,176,184, GM 168 TOOTH
		473CW	W/ STATIC & CENTRUFUGAL ADJUST.	12.375	2.4" - 2.8"	19	490	492	RAM FORD 164,176,184, GM 168 TOOTH
11"	1600-2200#	474	W/ STATIC PRESSURE ADJUST.	12.375	2.4" - 2.8"	19	490	492	RAM FORD 164,176,184, GM 168 TOOTH
		474CW	W/ STATIC & CENTRUFUGAL ADJUST.	12.375	2.4" - 2.8"	19	490	492	RAM FORD 164,176,184, GM 168 TOOTH

SPECIAL NOTES: USE OF A COMPETITION LONG STYLE PRESSURE PLATE IN COMBINATION WITH A SOLID SINTERED IRON DISC REQUIRES A SAFETY BELLHOUSING. CLUTCH DISC IS LIMITED TO 75 RUNS.



# Car Builder

## RAM Hydraulic Release Bearings

RAM Hydraulic release bearings offer an efficient method of setting up a clutch release system in street, restoration vehicles, and resto-mods. Bearing assemblies are available for most early and late model applications including Tremec, Muncie, T-10, Saginaw, and T56 transmissions. Kits include all mounting hardware and bleed line. Requires an aftermarket 3/4 inch bore slave cylinder and -3AN feed line. Complete kits are also available for late model LS1, LS2, and 05 up Mustang that include all the fittings and adapters to connect to the factory master cylinder.



APPLICATION	PN	NOTES
FORD T5 TRANSMISSION	78130	INCLUDES TRANS. BEARING RETAINER
FORD TREMEC TRANSMISSION	78132	INCLUDES TRANS. BEARING RETAINER
FORD MUSTANG 05-08 GT500	78175	INCREASED TRAVEL BOLT ON KIT
GM UNIVERSAL , EARLY GM 3 & 4 SPEEDS, GM T5	78125*	1.700" OVERALL LENGTH, 1.375" I.D.
GM UNIVERSAL AFTERMARKET T56 TRANSMISSION	78160*	INCREASED TRAVEL BOLT ON KIT
GM T56 TRANS. LS1,LS6 F BODY, CORVETTE, GTO	78165	INCREASED TRAVEL BOLT ON KIT**
GM T56 TRANS. LS2, LS7 CORVETTE, GTO, SSR, CTS-V	78170	INCREASED TRAVEL BOLT ON KIT**
CHEVROLET CAMARO 2010-UP	78180	INCREASED TRAVEL BOLT ON KIT**
T56 0.156" STEEL SPACER SHIM	598	0.156" THICK. STACKABLE
T56 0.500" ALUMINUM SPACER PLATE	78511	0.500" THICK
T56 0.750" ALUMINUM SPACER PLATE	78513	0.750" THICK
RAM SLAVE HEIGHT ADJUST SHIM SET. 6 PCS.	78330	SPACES SLAVE ON BEARING RETAINER
REPLACEMENT BEARING ONLY	78015	EARLY PRESS ON STYLE
REPLACEMENT BEARING ONLY	78017	LATE PUSH ON STYLE
REPLACEMENT O RING KIT	78505	
REMOTE BLEEDER KIT	78510	

\*\*RAM HYDRAULIC BEARINGS ARE NOT A DIRECT REPLACEMENT PART AND MAY NOT BE SUITABLE FOR EVERY CLUTCH, FLYWHEEL, AND BELLHOUSING COMBINATION. MEASUREMENT AND POSITIONING REQUIRED TO INSURE A PROPER FIT.

## Release Bearings & Pilot Bearings

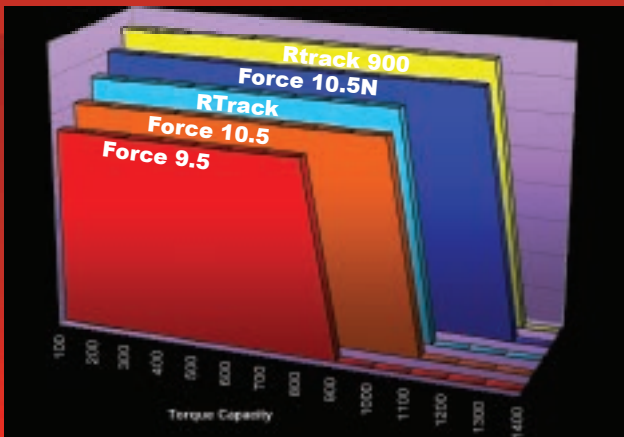
APPLICATION	PN	OVERALL LENGTH	FACE DIAMETER	INSIDE DIAMETER
<b>MECHANICAL RELEASE BEARINGS</b>				
AMC	481	1.700	2.735	1.300
CHRYSLER 1"-23 SPLINE INPUT SHAFT	483	2.000	2.725	1.250
CHRYSLER 1 3/16"-18 SPLINE INPUT SHAFT	482	2.175	3.100	1.425
FORD PRE 1986 1 1/16"-10 SPLINE W/PLATE & CLIPS	485	1.425	3.075	1.435
FORD PRE 1986 1 3/8"-10 SPLINE W/PLATE & CLIPS	486	1.500	3.675	1.730
FORD 86-04 1 1/16"-10, 11/8"-26 SPLINE INPUT, FOR DIAPHRAGM CLUTCHES	501	1.400	2.635	1.435
FORD 86-04 1 1/16"-10, 11/8"-26 SPLINE, LONG STYLE CONVERSION 1.7" O.L.	487	1.700	3.075	1.435
FORD 86-04 1 1/16"-10, 11/8"-26 SPLINE, LONG STYLE CONVERSION 1.5" O.L.	477	1.500	3.075	1.435
GM 11/8"-10, 1 1/8" 26 SPLINE INPUT MODELS	488	1.270	2.725	1.375
GM 11/8"-10, 1 1/8" 26 SPLINE, LONG STYLE CONVERSION 1.7" O.L.	489	1.700	3.075	1.375
GM 11/8"-10, 1 1/8" 26 SPLINE, LONG STYLE CONVERSION 1.5" O.L.	479	1.500	3.075	1.375
GM 11/8"-10, 1 1/8" 26 SPLINE, SPECIAL LENGTH 1.8" O.L. DIAPHRAGM USE ONLY	485*	1.800	2.735	1.375

APPLICATION	PN	OVERALL LENGTH	FACE DIAMETER	INSIDE DIAMETER	APPLICATION	PN	OVERALL LENGTH	FACE DIAMETER	INSIDE DIAMETER
<b>PILOT BUSHINGS</b>					<b>PILOT BEARINGS</b>				
AMC	BU74	0.750	1.055	0.755	AMC, CHRYSLER, JEEP	BA78	0.608	0.946	0.610
AMC, JEEP	BU76	0.625	1.055	0.675	AMC JEEP	BA206	0.714	1.054	0.625
AMC, JEEP	BU77	0.875	1.055	0.755	AMC JEEP	BA207	0.556	1.002	0.787
JEEP	BU79	0.622	1.055	1.055	FORD	BA50M	0.725	1.380	0.672
CHRYSLER PRODUCTS	BU286	0.875	0.941	0.755	FORD	BA50P	0.587	0.828	0.605
FORD	BU50D	0.500	1.850	0.672	FORD	BA94	0.663	1.856	0.703
FORD	BU50F	0.500	1.380	0.672	GM	BA381	0.715	1.094	0.593
FORD	BU50H*	0.750	1.380	0.672	GM, ISUZU, JEEP	BA82	0.626	0.828	0.612
FORD	BU50J	0.579	1.380	0.672					
GM	BU75	0.357	1.383	0.591					
GM	BU650	1.067	1.499	0.828					
GM	BU652	0.750	0.826	0.593					
GM	BU656**	0.750	1.094	0.593					

\* USE BA50M FOR NEEDLE ROLLER BEARING UPGRADE

\*\* USE BA381 FOR NEEDLE ROLLER BEARING UPGRADE

# Dual Disc options for any power level... street or track

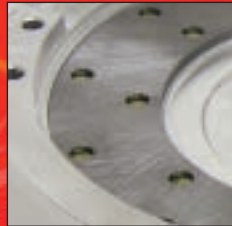


**Suggested torque capacities for RAM dual disc clutches**



RAM Poly-coil hub assembly boasts the strength needed for high torque applications. The urethane encapsulated damper springs provide up to four times the shock load of conventional clutch springs.

RAM billet flywheels are manufactured in house to our exacting standards for design, machining, and balance. Friction surfaces are precision ground for flatness, zero runout, and surface finish for friction material compatibility. And you get the right fit for your performance car!



RAM Street Dual disc systems are specifically engineered for today's late model performance cars and engine swaps into earlier vehicles. The purpose of these clutches is to provide smooth driveability for high power levels that was previously not available using aggressive friction material single disc clutches. Friction material is not the only consideration for good driveability. We also need to maintain enough overall weight in the clutch assembly so that the clutch can be driven at lower RPM and maintain vehicle inertia without 'bucking'. If the clutch assembly is built too light, driveability on the low-end suffers. Applications with large camshaft profiles are prone to this and need the inertia of a heavier unit if the owner wants to maintain this low speed driveability.

On the other hand, drivers of road-race inspired vehicles will benefit from the lighter weight of a smaller diameter clutch as it allows the vehicle to drive deeper into the turns before letting off the throttle, and accelerate back to torque range quicker coming out of the turns.

Most RAM Street Dual systems are engineered for proper fit with late model hydraulic release systems. The setup height of the clutch is critical to proper operation; this eliminates the need for spacers or other modifications to the release mechanism. Dual disc clutches that bolt to a stock flywheel can be a release problem! Most every RAM dual disc works with the factory release system; the few that do not will function correctly by adding a RAM internal hydraulic bearing.

So keep in mind, the smallest and lightest clutch assembly may not be right for your particular application. Depend on a clutch company that properly engineers their clutch systems to fit your particular vehicle. Contact the professionals at RAM to help you determine the best choice.

## Complete your install with RAM hydraulics!



RAM has carefully engineered hydraulic slave/bearing assemblies for late model vehicles, as well as to adapt hydraulics to your early musclecar. Late model kits include all the fittings and lines needed to adapt to your existing master cylinder. Our universal kits can be used with a master cylinder to fit your application and custom installation.



## How does RAM spend their weekends?

You have choices when selecting a clutch for your car or truck. So how do you decide what company is really qualified to build your clutch? The best way is to look at what a company has achieved in racing and the technology they have developed with this experience.

RAM Clutches has been building multiple disc clutches since 1978. Our record speaks for itself with 11 of the last 13 IHRA Pro Stock World Champions using our products. In Pro Modified, 2009 NHRA Champion Burton Auxier, 2009 ADRL Pro Nitrous Champion KA Balooshi, along with names such as Rickie Smith, Shannon Jenkins, and Charles Carpenter all rely on RAM to provide the cutting edge clutch technology they need to win on a consistent basis.

The choice is simple – go with the company and products that win races and championships!





# Force 9.5

The RAM Force 9.5 is the ideal entry level dual disc clutch for street use. With torque capacity to roughly 800-foot pounds and a moderate clamp pressure, it will handle small blower or turbo installations and provide a light pedal effort similar to the stock clutch. In fact, drivers of our 2010 Camaro test vehicle were not able to tell that the stock clutch was changed at all! The floater plate is driven from three sets of straps that eliminate any floater plate rattle at idle. The top clutch disc features a sprung hub assembly that absorbs the initial engagement of the clutch and reduces the chance of chatter on takeoff. This clutch is compatible with factory hydraulic release mechanisms except as noted in the application guide. It is compatible with all factory master cylinder systems when used in conjunction with a RAM hydraulic release bearing.

# Force 10.5

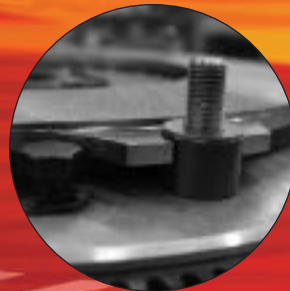
For higher horsepower applications, the Force 10.5 dual disc is the natural choice. Based on the design of the original RAM Street Dual, Force 10.5 is more street friendly by using a three strap system to locate the floater plate. This eliminates floater plate 'rattle' that is common on stand driven dual disc clutches. A high clamp load pressure plate assures plenty of holding power without excessive pedal pressure. Steel backed 300 series facing mean smooth engagement on takeoff and insure long service life. For higher torque capacities, the Force 10.5N features the proven RAM 900 series metallic facings. Force 10.5 dual disc systems handle bigger torque loads and are a bit heavier than their smaller cousins. This higher inertia translates into better low speed driveability in heavier vehicles, or in large camshaft profile applications. If you are bolting on a larger blower or turbo system, Force 10.5 may be the best choice for you.

# RTrack 10.5

The RAM RTrack Dual is modeled after our highly successful drag racing clutches used in high horsepower Pro Stock and Pro Modified applications. The major difference between these clutches and the Force 10.5 is the floater drive system. RTrack Dual uses a stand driven floater plate, which provides higher torque capacity and negative load capacity for vehicles that see more use at the track. It uses a 2400 pound clamp load pressure plate for good holding power without excessive pedal effort, and features 300 series sprung hub top disc and solid hub bottom disc for smooth engagement. A 900 series disc version is available for higher torque load applications up to about 1300 foot pounds. Expect some floater plate noise at idle with this unit's drive system. If you need the ultimate in holding power and durability for street or strip, the RTrack Dual is for you!



**Fully strapped floater**



**Stand driven floater**





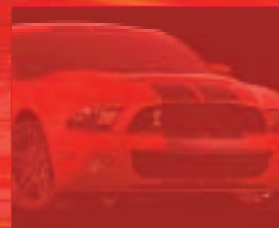
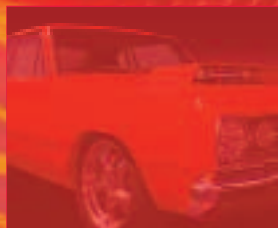
# APPLICATION GUIDE

Make Model	Application	Force 9.5	Force 10.5	Force 10.5 900S	RTrack Dual	Rtrack Dual 900S	Hyd. Brg.	
<b>Chevrolet</b>								
Camaro 10-up	LS3	75-2100	80-2100*	80-2100N*	90-2100*	90-2100N*	78180	
Camaro 98-02	LS1	75-2100	80-2100	80-2100N	90-2100	90-2100N	78165	
Chevrolet all	LSX 8 bolt crank	75-2117	80-2117	80-2117N	90-2117	90-2117N		
Corvette 05-12	LS2, LS3, LS7	75-2100	80-2100	80-2100N	90-2100	90-2100N	78170	
Corvette ZR-1	LS9 (incl. crate engine apps.)	75-2115	80-2115	80-2115N	90-2115	90-2115N		
Corvette 97-04	LS1, LS6, LS7	75-2100	80-2100	80-2100N	90-2100	90-2100N	78165	
Muscle cars	Early SB/BB 1 1/8-10 168T '0' bal	75-2120	80-2120	80-2120N	90-2120	90-2120N	78125HD	
	Early SB/BB 1 1/8-10 153T '0' bal	75-2122	80-2122	80-2122N	90-2122	90-2122N	78125HD	
	Early SB/BB 1 1/8-26 168T '0' bal	75-2125	80-2125	80-2125N	90-2125	90-2125N	78125HD	
	Early SB/BB 1 1/8-26 153T '0' bal	75-2127	80-2127	80-2127N	90-2127	90-2127N	78125HD	
	Early BB 1 1/8-10 168T '454' bal	75-2130	80-2130	80-2130N	90-2130	90-2130N	78125HD	
	Early BB 1 1/8-10 153T '454' bal	75-2132	80-2132	80-2132N	90-2132	90-2132N	78125HD	
	Early BB 1 1/8-26 168T '454' bal	75-2135	80-2135	80-2135N	90-2135	90-2135N	78125HD	
	Early BB 1 1/8-26 153T '454' bal	75-2137	80-2137	80-2137N	90-2137	90-2137N	78125HD	
	Early SB 1 1/8-10 168T '400' bal	75-2140	80-2140	80-2140N	90-2140	90-2140N	78125HD	
	Early SB 1 1/8-26 168T '400' bal	75-2145	80-2145	80-2145N	90-2145	90-2145N	78125HD	
	Late SB 1 1/8-10 168T 'EXT' bal	75-2150	80-2150	80-2150N	90-2150	90-2150N	78125HD	
	Late SB 1 1/8-26 168T 'EXT' bal	75-2155	80-2155	80-2155N	90-2155	90-2155N	78125HD	
	Late 572 1 1/8-26 '0' bal.	75-2125	80-2125	80-2125N	90-2125	90-2125N	78125HD	
	Late 454/502 1 1/8-10 168T ext. bal	75-2165	80-2165	80-2165N	90-2165	90-2165N	78125HD	
	Late 454/502 1 1/8-26 168T ext. bal	75-2170	80-2170	80-2170N	90-2170	90-2170N	78125HD	
*requires 78180 slave/bearing								
<b>Dodge/Chrysler</b>								
Challenger	08-12 RT,SRT8	75-2370	80-2370	80-2370N	90-2370	90-2370N	78185	
Viper	03-06		80-2395	80-2395N	90-2395	90-2395N		
Muscle cars	SB Chrysler 1-23 130T '0' Bal. 6 Bolt	75-2300	80-2300	80-2300N	90-2300	90-2300N	78134	
	SB Chrysler 1-1/8-26 130T '0' Bal. 6 Bolt	75-2305	80-2305	80-2305N	90-2305	90-2305N		
	SB Chrysler 1 3/16-18 130T '0' Bal. 6 Bolt	75-2310	80-2310	80-2310N	90-2310	90-2310N		
	BB Chrysler 1-23 130T '0' Bal. 8 Bolt	75-2330	80-2330	80-2330N	90-2330	90-2330N	78134	
	BB Chrysler 1 1/8-26 130T '0' Bal. 8 Bolt	75-2335	80-2335	80-2335N	90-2335	90-2335N		
	BB Chrysler 1 3/16-18 130T '0' Bal. 8 Bolt	72-2340	80-2340	80-2340N	90-2340	90-2340N		
	BB Chrysler 1-23 143T '0' Bal. 8 Bolt	75-2350	80-2350	80-2350N	90-2350	90-2350N	78134	
	BB Chrysler 1-1/8-26 143T '0' Bal. 8 Bolt	75-2355	80-2355	80-2355N	90-2355	90-2355N		
	BB Chrysler 1 3/16-18 143T '0' Bal. 8 Bolt	75-2360	80-2360	80-2360N	90-2360	90-2360N		
<b>Ford</b>								
Mustang	GT500 8 bolt 1 1/8-16	75-2220	80-2220	80-2220N	90-2220	90-2220N	78175	
	GT 05-10 6 bolt 1 1/16-10	75-2260	80-2260	80-2260N	90-2260	90-2260N	78175	
	GT 05-10 6 bolt 1 1/8-26	75-2265	80-2265	80-2265N	90-2265	90-2265N	78175	
	2011-12 (5.0L) 8 bolt 1-23	75-2230	80-2230	80-2230N	90-2230	90-2230N	78175	
	01-04 Cobra 8 bolt 1 1/8-26	75-2220	80-2220	80-2220N	90-2220	90-2220N	78132*	
	GT 96-04 4.6L 6 bolt 1 1/16-10	75-2260	80-2260	80-2260N	90-2260	90-2260N	78130*	
	GT 96-04 4.6L 6 bolt 1 1/8-26	75-2265	80-2265	80-2265N	90-2265	90-2265N	78132*	
	5.0L 86-95 1 1/16-10	75-2240	80-2240	80-2240N	90-2240	90-2240N	78130	
	5.0L 86-95 1 1/8-26	75-2245	80-2245	80-2245N	90-2245	90-2245N	78132	
	Muscle cars	Ford SB 1 1/16-10 157T 28 oz/in Bal.	75-2250	80-2250	80-2250N	90-2250	90-2250N	78130
		Ford SB 1 1/8-26 157T 28 oz/in Bal.	75-2255	80-2255	80-2255N	90-2255	90-2255N	78132
		Ford SB 1 1/16-10 157T '0' Bal.	75-2257	80-2257	80-2257N	90-2257	90-2257N	78130
		Ford SB 1 1/8-26 157T '0' Bal.	75-2259	80-2259	80-2259N	90-2259	90-2259N	78132
BB Ford 1 1/16-10 184T '0' Bal.			80-2275	80-2275N	90-2275	90-2275N	78130	
BB Ford 1 1/8-26 184T '0' Bal.			80-2280	80-2280N	90-2280	90-2280N	78132	
BB Ford 1 1/16-10 184T 28 oz/in Bal.			80-2285	80-2285N	90-2285	90-2285N	78130	
BB Ford 1 1/8-26 184T 28 oz/in Bal.		80-2290	80-2290N	90-2290	90-2290N	78132		
*requires modification to the transmission quill for proper fit								
<b>Pontiac</b>								
Firebird	98-02 LS1	75-2100	80-2100	80-2100N	90-2100	90-2100N	78165	
Muscle cars	Pontiac 64-76 2.75" register 166T 1 1/8-10	75-2400	80-2400	80-2400N	90-2400	90-2400N	78125HD	
	Pontiac 64-76 2.75" register 166T 1 1/8-26	75-2410	80-2410	80-2410N	90-2410	90-2410N	78125HD	



**DUAL DISC CLUTCHES**

**HYDRAULICS**







# Hydraulics



RAM hydraulics offer flexibility in setting up the clutch release system on your early or late model performance car or truck..New HD versions offer the upmost in durability and long life over factory hydraulic systems. Full adjustability means easy setup with any aftermarket clutch, single or dual disc.

RAM hydraulic bearings offer an efficient method of setting up a clutch release system in street, restoration, and resto-mods. Bearing assemblies are available for 'universal' applications including Muncie, Saginaw, Borg Warner, Tremec, and T56/6060 transmissions. A new HD version includes larger o-rings and backup rings for better strength and durability in street driven vehicles.

For late model performance vehicles such as Camaro, Corvette, and Mustang, RAM offers hydraulic bearing kits that include the HD bearing assembly plus all of the lines, fittings, and adapters required to connect the bearing to the factory master cylinder. Increased travel, quicker release and engagement, and adjustability to suit any clutch system in single or dual disc make RAM bearings an excellent choice for your late model muscle car.



Bearing position adjustment is easily achieved with the new RAM pedal adjustment system. Some factory and aftermarket clutches have a very high engagement point on the pedal that is not comfortable for most drivers. By installing the RAM adjuster in-line with your factory or aftermarket hydraulic bearing, the pedal position can be moved down to a more comfortable driving position. A bonus feature of this adjuster is the ability to control the release distance of the clutch, preventing overtravel of the clutch fingers which can lead to the clutch 'sticking' at higher engine RPMs.



*The RAM bearing adjuster will NOT increase bearing travel. It lets you limit or reduce travel length. Plumbing the adjuster to factory hydraulics requires adapting the factory feed line to the -3an fitting on the adjuster, or replacing the factory line with a teflon -3an line.*

# Applications

## Repair parts/accessories



### COMPLETE BEARINGS AND BEARING KITS

78125	Universal GM hydraulic bearing	Fits Muncie, Saginaw, BW w/ 1.370" collar diameter
78125HD	Universal GM hydraulic bearing HD	Fits Muncie, Saginaw, BW w/ 1.370" collar diameter
78130	Ford/T5 hydraulic bearing HD	Fits Ford/T5 transmissions 86-95
78132	Ford/Tremec hydraulic bearing HD	Fits Ford/Tremec transmissions, TKO500/600
78134	Chrysler hydraulic bearing HD	Fits Chrysler transmissions with 1-23 spline
78160	Universal T56 hydraulic bearing HD	Fits custom installs of 98-up T56 in earlier model cars
78165	T56 hydraulic bearing kit HD	Fits T56 F-body 98-02, C5 Vette 97-04
78170	T56 hydraulic bearing kit HD	Fits C6 Vette 05-10
78173	T56 hydraulic bearing kit HD	Fits GTO 05-06
78175	T56/6060 hydraulic bearing kit	Fits Mustang 05-10
78180	TR6060 hydraulic bearing kit	Fits 10-up Camaro
78183	TR6060 hydraulic bearing kit	Fits 08-10 Challenger
78185	Hydraulic bearing kit	Fits 11-up Mustang 5.0L

78300 Bearing/pedal adjuster Adjusts pedal position/travel with RAM and OE bearings\*

\*OE bearing applications require adaption to the factory line, or replacement with a teflon feed line. See parts listings below.

### REPLACEMENT PARTS/ADAPTERS/ACCESSORIES

78017	Replacement bearing	Push on style for all RAM hydraulic bearings
78310	Adapter fitting	Adapts factory master to -3AN male, GM 05-up, Ford 05-up
78320	Teflon line 12"	-3AN straight to straight ends
78322	Teflon line 18"	-3AN straight to straight ends
78324	Teflon line 36"	-3AN straight to straight ends
78326	Teflon line 18"	-3AN straight to 90 degree ends
78328	Teflon line 36"	-3AN straight to 90 degree ends
78330	Shim set	Conical shim set for bearing adjustment
78335	Adapter fitting	-3AN male to -3AN male
78337	Adapter fitting	-3AN male to -4AN male
78339	Hose fitting	-4AN female reusable hose end
78341	Adapter fitting	Compression fitting 1/8" to male 1/8 pipe thread
78343	Adapter fitting	1/8 female pipe thread to -3AN
78350	Feed line kit	Works with stock or aftermarket bearings 10-up Camaro, 05-11 Mustang
598	Universal spacer	.187" spaces T56/6060 collar off transmission
78511	Universal spacer	.500" spaces T56/6060 collar off transmission
78513	Universal spacer	.750" spaces T56/6060 collar off transmission
78514	Universal spacer	1.00" spaces T56/6060 collar off transmission
78515	Universal spacer	1.25" spaces T56/6060 collar off transmission
78505	O-ring kit	All standard duty hydraulic bearings, .068" diameter
78509	O-ring kit	All HD hydraulic bearings, .138" diameter w/ backup rings
78510	Bleed line kit	works with all RAM hydraulic bearings, 12" bleed line