

Hydraulic Throw-out Bearing Retrofit

Part 1 - Overview:

Providing this info after only a few months of care free test driving.

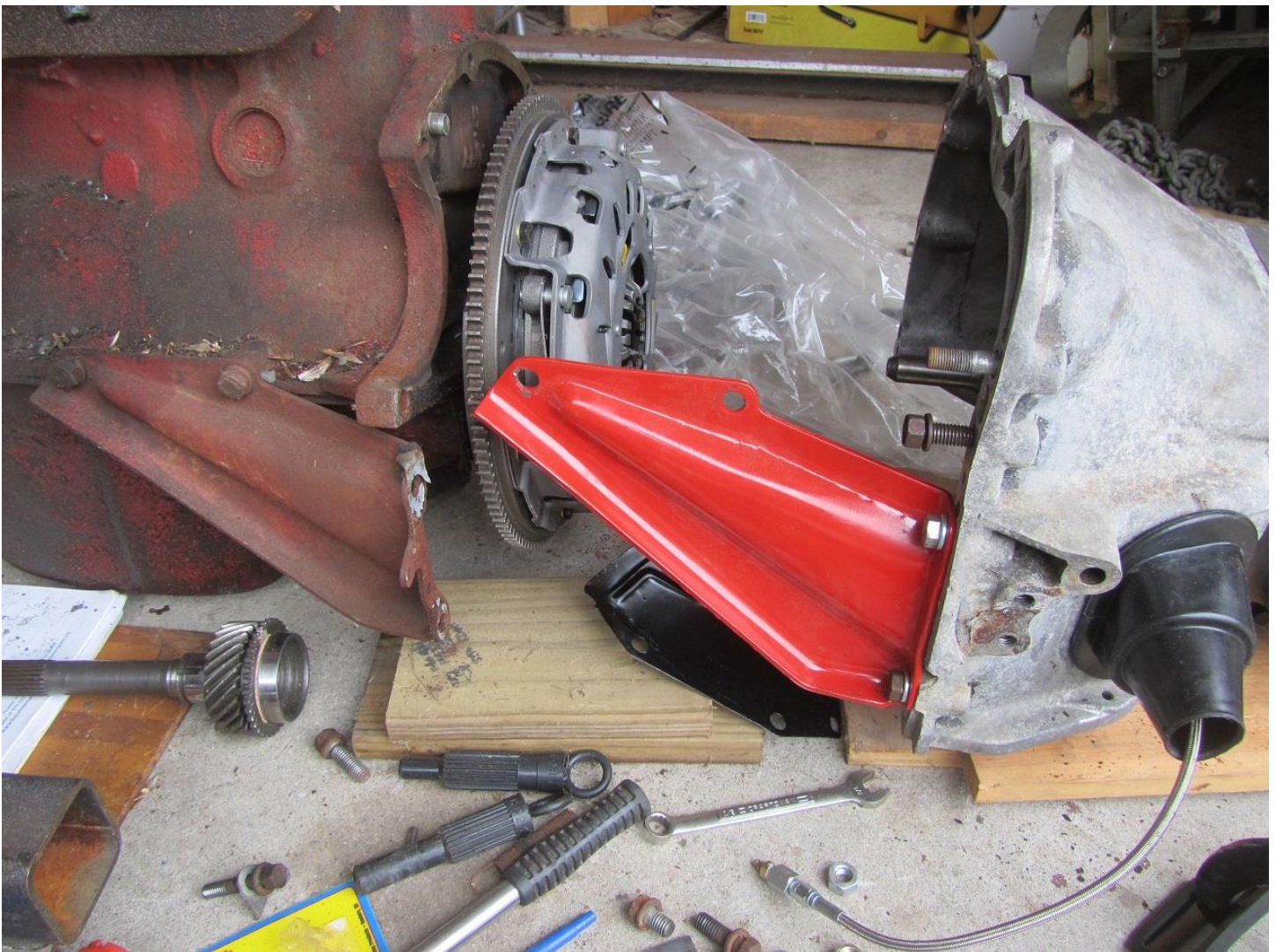
Using current day hydraulic throw-out bearing on the vintage Mopars provides:

- 1) Reduced clutch pedal activation force (great for your left knee in stop & go traffic)
- 2) Eliminates commonly occurring stock "z" bar clutch linkage failures
- 3) Provides added under hood room and access

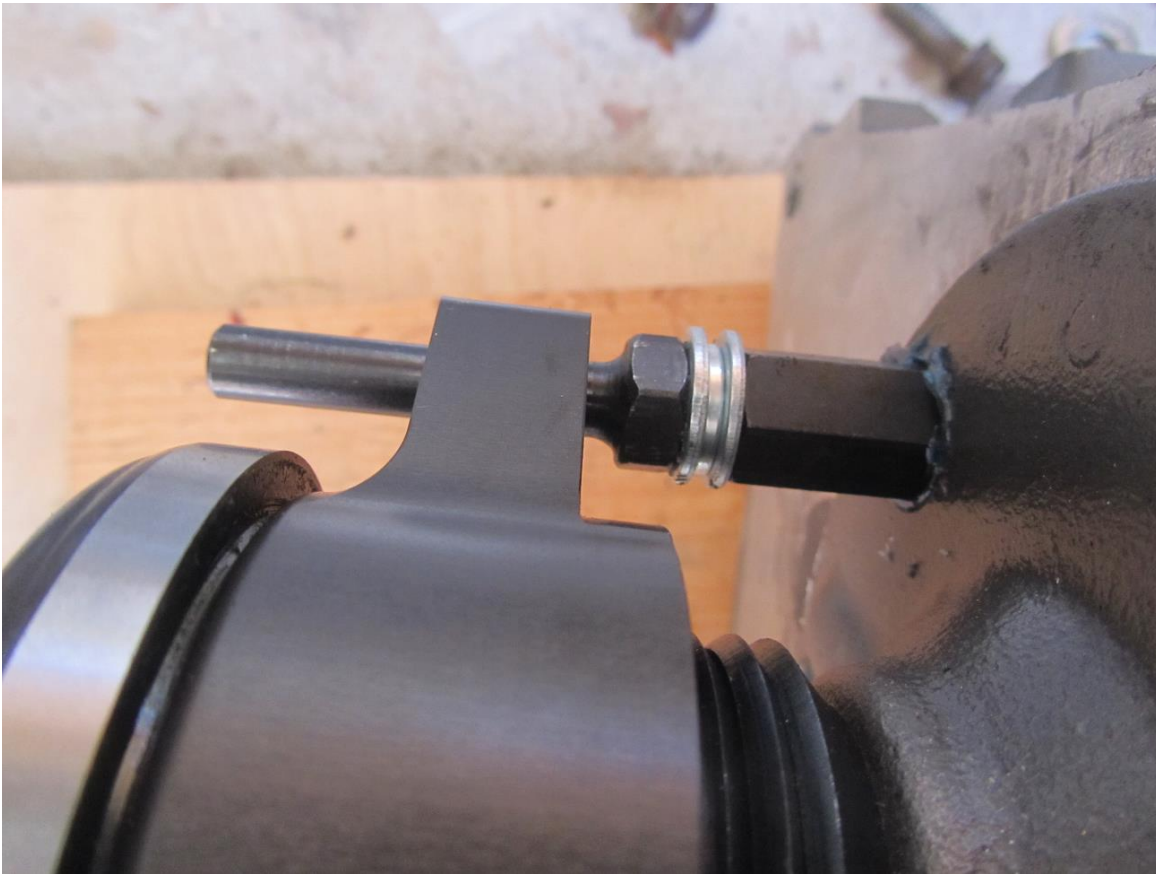
Installation info shown is on a 65 Dart with 225 Slant six with 4 speed transmission. The 4 speed is a late model 70's overdrive. The info provided could be applied to multiple engine and transmissions with some adjustments.

The big picture.....

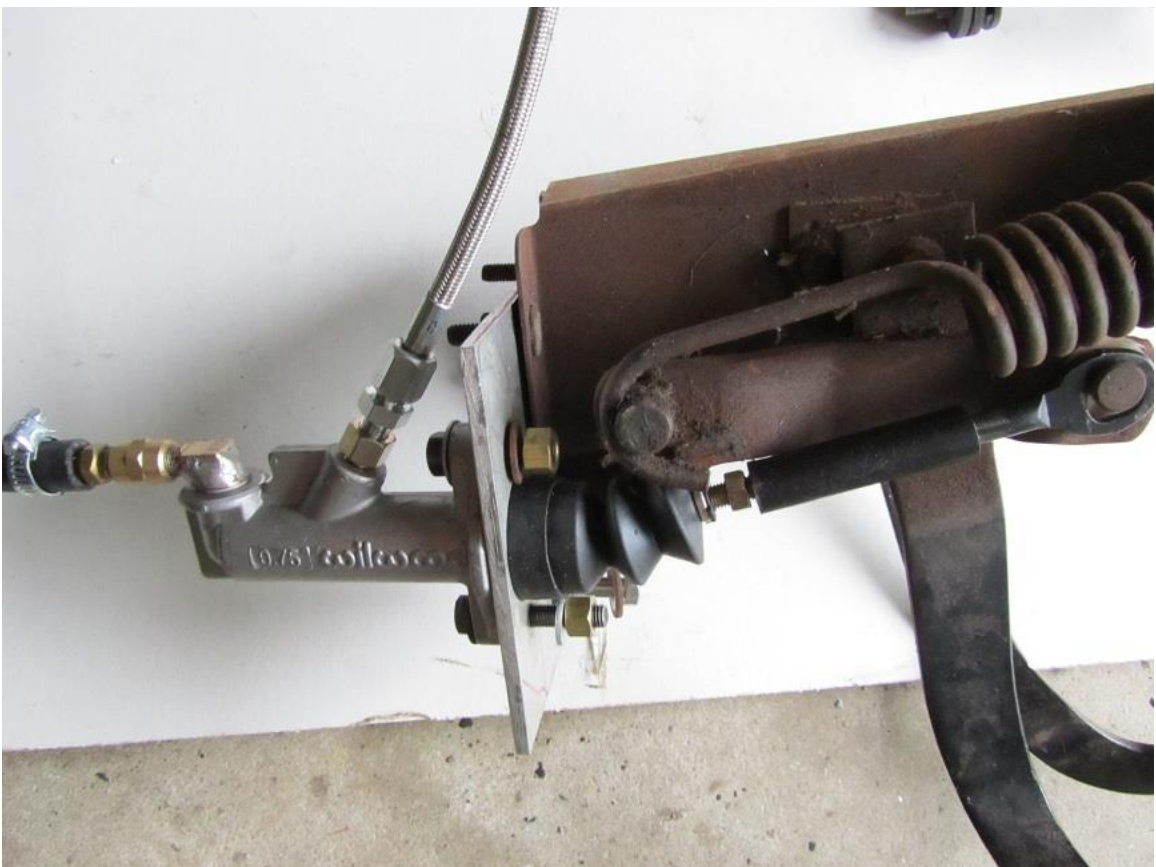
Engine Block to Transmission:



Hydraulic Throw-out Bearing on Transmission:



Master Cylinder to Clutch Pedal:



Major components for the install included:

- 1) Wilwood Compact Master Clutch Cylinder
- 2) Wilwood Master Clutch Cylinder Hydraulic Reservoir
- 3) Ford Ranger Diaphragm Clutch Pressure Plate
- 4) Ram Industries Hydraulic Throw-out Bearing
- 5) Hydraulic Lines
- 6) B & B 9 1/8 Clutch Disc
- 7) Transmission 1.375" Collar Adapter
- 8) Re-drilled Stock Flywheel
- 9) Reduced (Smaller Diameter Coils) Clutch Pedal Overtravel Spring

Master Cylinder Info:

MasterCylinder No: 260-6089

Saturday, August 20,

Master Cylinder

Compact Master Cylinder



Wilwood Compact Master Cylinder



Remote Reservoir Compact Master Cylinders are the perfect solution for club sport racers, small open wheel cars, or any other custom application where there is limited space for the master cylinder and fluid reservoir. Aluminum cylinders designed for use with either a detachable or remote fill reservoirs. Available in three bore sizes from .625" to .750" with a full 1.4" of stroke to accommodate short pedal ratios, small brake calipers, and hydraulic clutch actuation on space limited applications. Reservoir kits with fittings are available under part #'s 260-7577 (4.0 Oz.) or 260-8742 (10.0 oz)

Product Summary

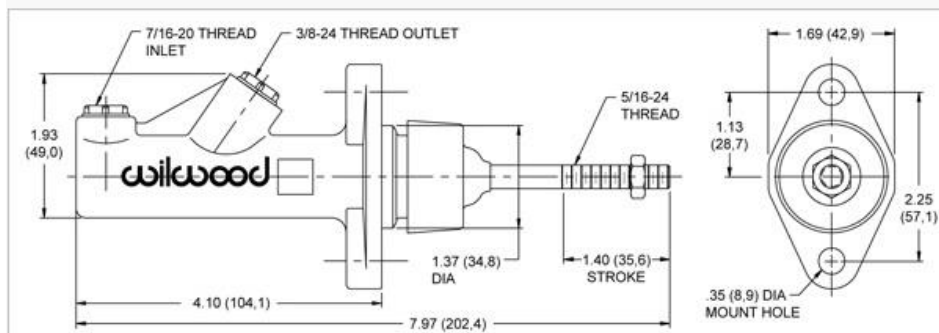
Master Cylinder Dimensions

Bore Size:	Area (in):	Stroke:	Volume (cu in):
3/4"	0.44	1.4	0.53

Master Cylinder Description

Type:	Outlets:	Material:	Finish:
Single Outlet	1	Aluminum	Bare
Res Type:	Res Size (oz):	Res Size (cu in):	Rate:
Remote			

Master Cylinder Dimensions



Additional Dimensions

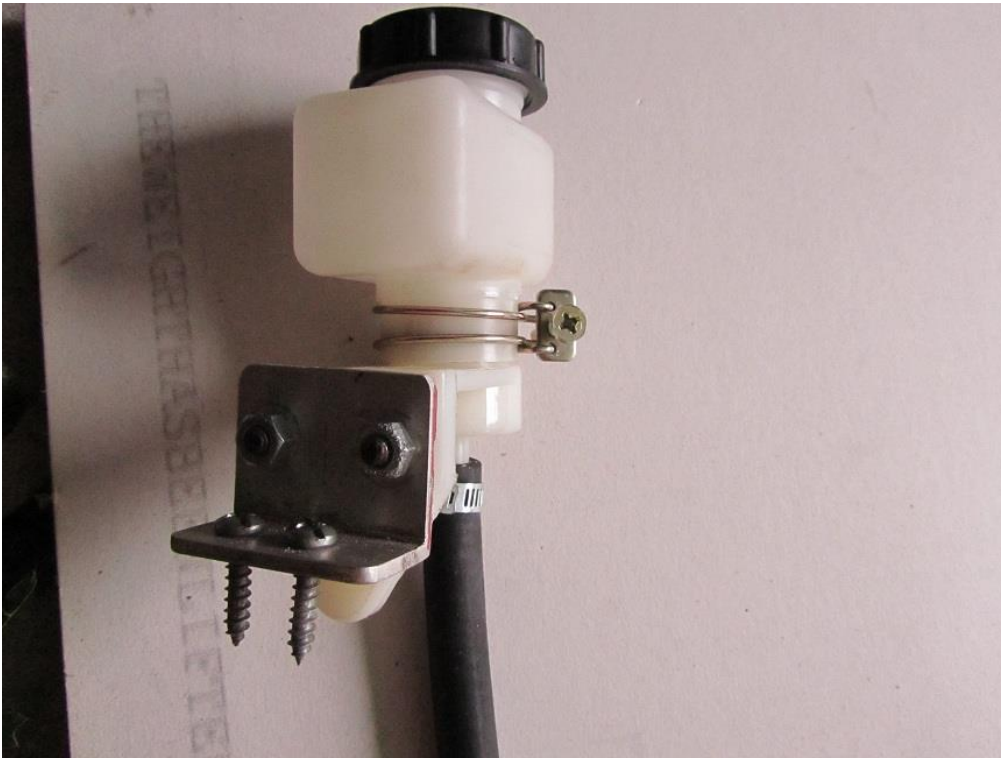
Overall Length(in):	7.97"
Flange to End Length (in):	4.10"
Inlet Size (in):	7/16-20
Inlet Fit (in):	
Outlet Size 1 (in):	3/8-24
Outlet Fit 1 (in):	3/8-24 IF Female
Outlet Size 2 (in):	
Outlet Fit 2 (in):	

Clutch Pedal Movement at Clutch Master Cylinder Attachment 1.125"

Maximum Allowed Clutch Master Cylinder Movement 1.4"

Volume of Fluid Displaced By Clutch Master Cylinder (in³) .49

Master Cylinder Reservoir Wilwood 260-7577:



99 Ford Ranger 3.0L 9 1/8 Diaphragm Pressure Plate:



Checking
Ranger PP
Against
Centerpunch
marks

Ram 78125HD Hydraulic Throw-out Bearing:



Video

https://www.youtube.com/watch?time_continue=94&v=qrFOBBgSv4Y

Instructions

https://ramclutches.com/sites/ramclutches.com/files/attachments/form_b78125_78125_bearing.pdf

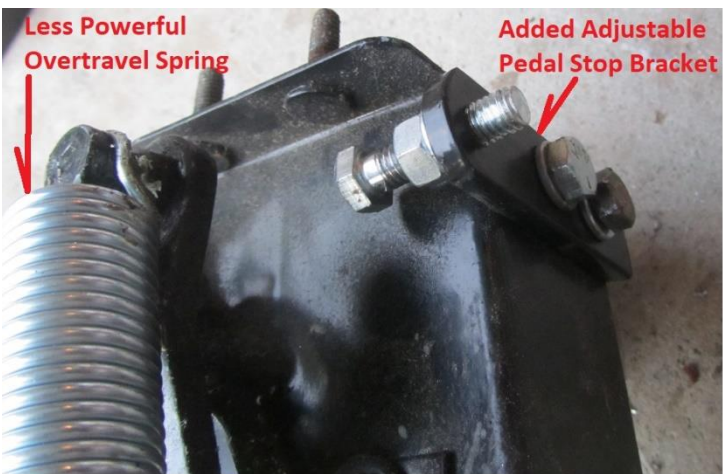
Hydraulic Lines (-3AN) 48" long :



Re-drilled Stock Flywheel:



Reduced Pedal Effort also = to Clutch Pedal Overtravel Spring Allowed Change With Hydraulics:



Smaller and more coils



Original Stock big & fewer coils

Part 2 (details) to follow.