



TMR Advantages

1) Patent Pending Flexible center seal:



TMR s Seal

Competitor s seal

Benefit: Allows for misalignment of the pushrod and slack adjuster during installation and/or misalignment of the main spring without wearing out the seal. *(New seal design has exceeded 1,000,000 cycles.)*

2) TMR product is designed to minimize coil clash:



TMR

Competitor

Springs were cycle tested per SAE salt spray requirements.

Benefit: Protects the main spring from rust to extend the cycle life of spring.

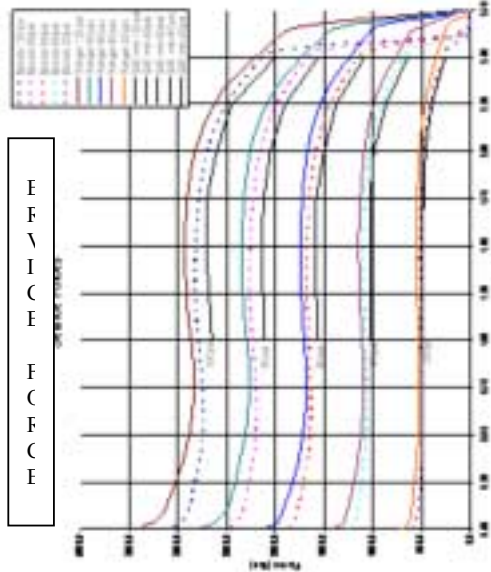
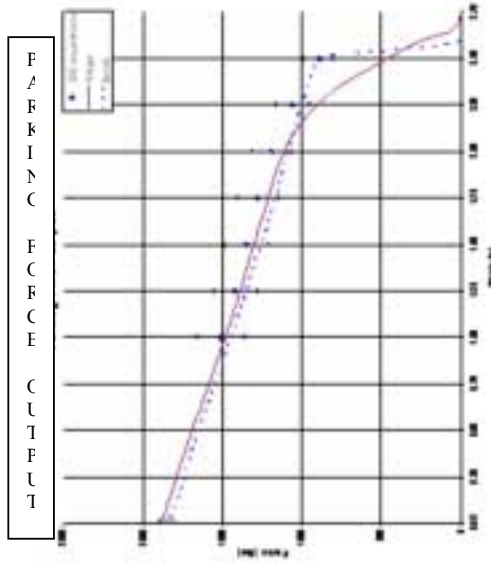
3) Breather holes on the spring housing are designed to be sealed by the parking diaphragm:



TMR

Competitor

Benefit: Keeps water out of the housing while the truck is traveling down the road. (Reduces moisture and rust on housing and main spring.)



Tests Performed
January 2007

Competitor Analysis

Type 3030 Tandem Spring Brake



TMR Spring Brakes vs. Competitor



Performance Comparison

	TMR	Competitor	SAE Spec.
Hold Off Press.	68 psi	66 psi	70 psi Max

Parking Force	(All forces measured in lbs.)		
1.00"	1433	1477	1359 min
1.50"	1263	1288	1215 min
2.00"	1093	1104	1071 min
2.50"	820	462	805 min

Service Force	(All forces measured in lbs.)		
1.00"	1068	1101	1025 min
1.50"	1099	1135	1030 min
2.00"	1025	1075	990 min
2.50"	671	726	640 min

Forces were taken with 40 psi applied to the chamber.

Service Vol.	92 in ³	95 in ³	95 in ³ max
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Parking Vol.	107 in ³	115 in ³	N/A
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Material Comparison

Component	TMR		Competitor	
	Material	Plating	Material	Plating
Adapter Base	Alum.	--	Alum.	--
Spring Housing	Steel	Gold Zinc	Steel	Black E-Coat
Non Press. Housing	Steel	Gold Zinc	Steel	Black E-Coat
Pressure plate	Alum.	--	Steel	No plating
Return Spring	Steel	Galv. or Zinc	Steel	Black E-Coat
Main Spring	Steel	Black E-Coat	Steel	Black E-Coat



Part Comparison After SAE 96 Hour Salt Spray Test:



Exterior Corrosion Progression of SAE Salt Spray Test:

