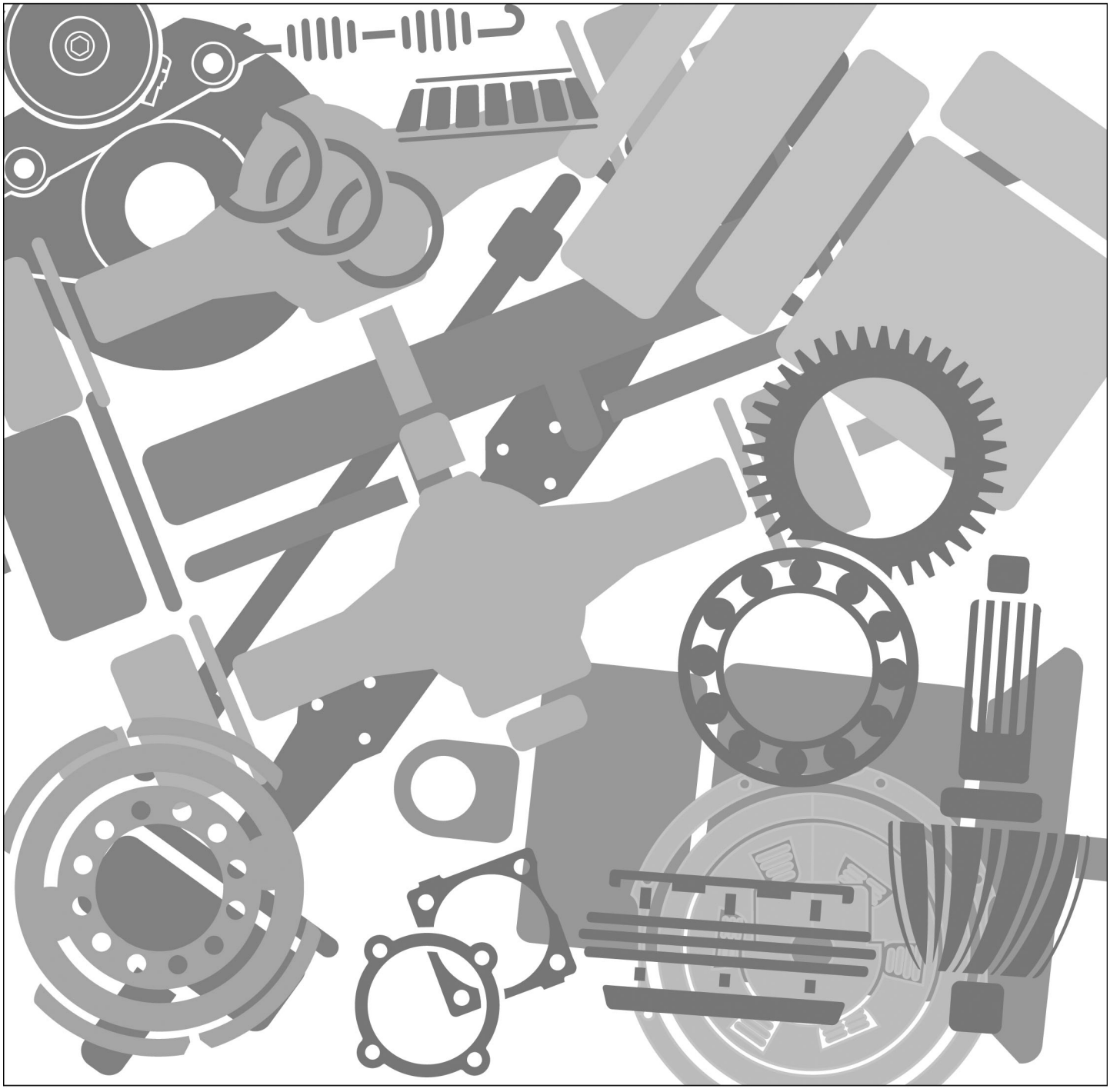
Roadranger®

Clutch Selection Guidelines

DANA SPICER® | EATON

One Great Drivetrain from Two Great Companies

C102-HVTSS June 2003



For the most current information, visit the Roadranger web site at www.roadranger.com

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General Information

Eaton® Fuller® Solo® Medium-Duty

The Eaton Fuller Solo is the industry's first Adjustment-Free clutch. As a fully adjustment-free clutch, the Solo not only stays in constant adjustment giving it extremely long life, but the adjustments are made without the need to incur additional labor costs. This clutch easily handles engines developing up to 900 lb.ft. of torque. The adjustment-free Solo dramatically reduces clutch costs: up to 30% greater clutch life from constant adjustment, and another 30% more longevity and 75% less flywheel wear thanks to a new revolutionary ceramic material. The Solo is 100% compatible with all mechanical linkages (a separate part number exists for hydraulic linkages) and is a direct replacement for the Eaton Fuller Stamped Angle-Spring®. It is available with ceramic facings in either single or two plate designs.

Eaton® Fuller® Solo® Heavy-Duty

Why call it Eaton Fuller Solo? Mostly because we've created a clutch that adjusts all by itself. A brand new technology. Nothing like it. With every push of the pedal, Solo's innovative wear-adjusting technology checks for proper alignment and makes any adjustments necessary. This technology eliminated a minimum of 13 manual clutch adjustments to reduce downtime and cut maintenance costs. No mechanic. No tools. Nobody. Constant adjustment and advanced new, revolutionary materials provide 60% greater longevity and a 50% reduction in flywheel wear. In addition, Solo maintains clutch brake squeeze allowing for smoother shifts in first and reverse. It is available in a 15.5" two-plate clutch.

Eaton® Fuller® Solo® Remanufactured

The key to maximizing life is minimizing wear. The key to minimizing wear is proper adjustment. As a fully adjustment-free clutch, Solo Remanufactured clutches not only stay in constant adjustment giving it extremely long life, but the adjustments are made without the need to incur additional labor costs.

Printed in U.S.A.

General Information (Continued)

Eaton® Fuller® Angle-Ring® Push Type

The key feature of the Eaton Fuller Angle-Ring clutch is its belleville spring and lever design which makes constant plate load possible. Because of this the Eaton Fuller Angle-Ring clutch maintains good engagement throughout its entire life. Also because the spring is isolated from the pressure plate, damage from heat transfer is virtually eliminated. For service operations, a unique feature of the Angle-Ring is that it is an excellent retrofit clutch. Compact in size, (3" in height), the clutch easily and quickly fits into shallow bell housings, and weighing approximately 35 Ibs., it handles easily and has multiple bolt patterns to fit most trucks. The Angle-Ring is available in 14" (350mm), 13" (330mm) and 12.2" (310mm) single-plate sizes in several spline sizes, all with ceramic discs.

Eaton® Fuller® Easy-Pedal® Plus™

Eaton Fuller's 14" and 15.5" Easy-Pedal Plus clutches are available for use on Class 8 trucks with engines up to 600 horsepower for specific models and applications. The Easy-Pedal Plus clutches are the most advanced in the industry. Both the 14" and 15.5" models offer these advantages:

- Lower pedal effort/bearing load
- Smooth engagement
- Maximum ventilation for cooler operation
- Simplified adjustment
- Direct interchangeability

The Easy-Pedal Plus design decreases pedal effort as much as 50% by use of assist springs and increases facing life up to 25% more than other pull-type clutches. Pressure plate load is always constant-regardless of age or wear-because of the precise angle of Eaton's rugged angle spring design. An added benefit of the 14" and 15.5" Easy-Pedal Plus clutches is Eaton Fuller's Kwik-Adjust™, a manual adjusting, easy lock component. It allows quick adjustment, is easy to reach, and has no bolts to remove.

Easy-Pedal® Remanufactured Clutches

These clutches offer many features which are not available with the older Angle-Spring® clutches. The Easy-Pedal Reman offers 50% less pedal effort. It comes with the patented Kwik-Adjust™ mechanism to simplify and reduce adjustment time. Another patented feature of the Easy-Pedal Reman is the Positive Pin™ Separator (in 15.5" clutches) which offers smoother engagement and longer life for the Easy-Pedal Remanufactured Clutches.

Eaton® Fuller® Stamped Angle-Spring® Pull-Type

The Stamped Angle-Spring clutch is the first specifically engineered for Class 6 and 7 medium-duty trucks with diesel engines. It easily handles engines developing up to 900 lb. ft. of torque. It has all the features of the well proven Cast Angle-Spring plus low inertia driven discs, for improved shift effort, positive separator pins for reduced clutch drag, and the Kwik-Adjust™ for easier set-up and adjustment. The Stamped Angle-Spring is available in $1^{3}/_{4}$"-10 spline size. The Stamped Angle-Spring also has a pull-type release and is designed for a flat flywheel specifically for mid-range engines. The stamped steel cover and a strap drive were chosen to provide quiet and longer operating life. The Stamped Angle-Spring clutch is offered only with a dampened free travel driven disc. It is available with ceramic facings in either single or 2-plate.

Eaton® Fuller® Roadranger® ValueClutch™

The Roadranger ValueClutch is intended to replace the Eaton Fuller Remanufactured Cast Angle Spring® Clutch line, enabling it to be competitive with non-genuine suppliers. Offering 11 new part numbers, the ValueClutch is being manufactured for older generation vehicles that sometimes do not require all the design features of current Eaton Fuller Clutch product lines, new or remanufactured.

Reasons Why You Get Options From Eaton® FULLER®

Which Facing? Organic or Ceramic

Organic facings are good for most on-highway applications where there are few starts and stops. For more demanding applications, on and off-highway, Eaton Fuller offers a more durable facing consisting of ceramic buttons. For really extreme workloads, and extended life, you can choose the Super-Duty 14" driven discs or the extra-heavy- duty 15.5" driven discs. The use of ceramic facings can increase clutch service life by as much as 75%. We recommend ceramic facings as a must for uneven road surfaces such as dirt, sand and mud, and to assure the best performance over the road.

Which Disc Type? Dampened or Rigid Driven Discs

There are several reasons for specifying dampened discs. Dampened driven discs are designed to control torsional vibrations in order to reduce spline wear, reduce transmission vibrations and gear rattle, and increase service life in the powertrain. With today's fuel efficient engines there are more torsional vibrations than ever before; therefore, the dampened type driven discs are recommended for all diesel applications. With our dampened disc selection, there never is a need for your customers to use a rigid disc.

Why use a Torque Limiting Clutch Brake?

This design is recommended for all heavy-duty applications. The Eaton Fuller torque-limiting brake has components designed to slip internally after approximately 12 lb. ft. of torque is exceeded. This reduces drive train breakage and extends clutch brake life and prevents transmission gear clash when shifting into first or reverse. The minimum additional expenditure is more than made up for when compared to the cost of replacing a clutch.

Kwik-Konnect™ Two-Piece Clutch Brake

The Eaton Fuller Kwik-Konnect Two-Piece Clutch Brake has been designed to provide effortless installation without transmission removal.

- Installs easily- without removing transmission
- Low inertia - longer tang life
- Lighter weight, patent pending design
- Non-asbestos facing material
- Increased ventilation for cooler operation

New vs. Remanufactured

In some instances, such as if the vehicle is approaching sale or trade-in age, a Eaton Fuller remanufactured clutch may be an adequate replacement choice. At the same time, however, if the vehicle is to provide long and rugged service, a cheaper remanufactured clutch may, in fact, cost more over the long-run in terms of early replacement and downtime costs. As such, it is important to consider both how, and for how long, a clutch will be used in determining whether to purchase a new or remanufactured clutch.

Remanufactured vs. Rebuilt

There is significant difference between a Eaton Fuller remanufactured clutch and any other brand of rebuilt clutch. A Eaton Fuller remanufactured clutch is completely reconstructed by the same people who originally designed and manufactured it. It contains new discs, a new, or optional reground intermediate plate, and a factory-assembled cover assembly. And it is set up to OEM specifications by trained Eaton Fuller technicians. A rebuilt clutch, on the other hand, is most often simply cleaned and repainted. Only broken parts are replaced, and then usually with used, and thus partially worn, parts.

PROGRAM CODE AND WEIGHT FACTORS

The following are the definitions of codes used within our guidelines and price lists:

Installation & Component			Wgt.
AS	–	14" Cast Iron Angle-Spring	110 lbs.
AS	–	15 1/2" Cast Iron Angle-Spring	150 lbs.
SAS	–	14" Stamped Angle-Spring (Single Plate)	70 lbs.
SAS	–	14" Stamped Angle-Spring (2-Plate)	100 lbs.
AR	–	350 MM/14" Angle-Ring	46 lbs.
AR	–	310 MM/13"	40 lbs.
EP	–	14" Cast Iron Easy-Pedal	110 lbs.
EP	–	15 1/2" Cast Iron Easy-Pedal	150 lbs.
SOLO	–	14" Stamped (Single Disc)	70 lbs.
		(Two Disc)	100 lbs.

Cover

AFG	–	Adjustment-Free with Greasable Bearing
MG	–	Manual Adjust with Greaseable Bearing
G	–	Greaseable Bearing

Facing Type

3SB	–	Three Super Buttons
3ST	–	Three Super Traps
4SB	–	Four Super Buttons

Disc Type

CO	–	Coaxial
DCF	–	Dampened Ceramic Facing
DIF	–	Dampered Iron Facing
DOF	–	Dampened Organic Facing
FT	–	Free Travel
LI	–	Low Inertia
LR	–	Low Rate
RCF	–	Rigid Ceramic Facing
ROF	–	Rigid Organic Facing

Disc Type

SD	–	Super-Duty
VCT Plus	–	Vibration Control Technology
(6)	–	6 Spring
(7)	–	7 Spring
(7 + 1)	–	7 Pre-Damper
(7 + 2)	–	7 Coax, 2 Single Spring
(9)	–	9 Spring
(10)	–	10 Spring

Suffixes

B	–	New installation, does not include clutch brake and pins
MO	–	Remanufactured with new intermediate plate, made in U.S.
MR	–	Remanufactured with reground intermediate plate, made in U.S.
Y	–	Includes release yoke

DETERMINING THE PROPER CLUTCH

1. Determine Size of Clutch (14" or 15.5")

2. If 15.5", then measure Center Flywheel Opening.
   ("A" dimension on illustration to the right.*)
   Approximate flywheel sizes: 7", 8.5" or 10"

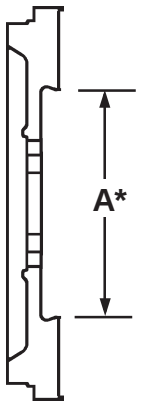
* If Flywheel Bore is 7", You can **Only** use an 8 Spring Damper

* If flywheel Bore is 8.5", use a 10 Spring Damper

* If Flywheel Bore is 10", use a 7 Spring, or a 9 Spring (Mack only)

* If you have a 10" flywheel bore, DO NOT USE ORGANIC FACINGS. The facing I.D. will extend into flywheel bore opening and you will not have full facing contact.

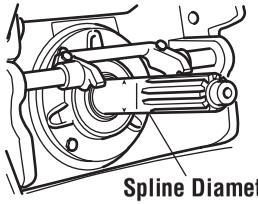
3. Then determine Engine Torque at Current Settings.
   (See pages 16-21 for rating)



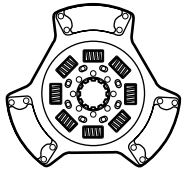
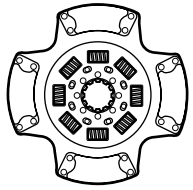
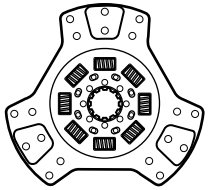
Determining Flywheel Size

Eaton® Fuller® Medium-Duty Clutch Selector

1 You MUST know these *specs* to use this chart:

Linkage Stroke	Spline Diameter	Engine Torque
Refer to OEM for Stroke/Bearing Travel capabilities: Application Guide Eaton CLSL-1276	 Spline Diameters: 1.75" or 2.00"	Clutch Torque Rating (in chart) *Must EQUAL or EXCEED* Engine Torque Rating

Additional options that are in the chart:

Damper Type	New or Reman?
 3 Super Button (3 SB)  4 Super Button (4 SB)  3 Trap	New • Longer Service Life • Less Downtime Remanufactured • Economy • Longer Service Life Compared to Rebuilt

2 Narrow down your choices starting with Linkage Stroke

3 The part numbers along any horizontal row are alternatives for the specifications

Standard Stroke: .500" to .560" Bearing Travel

Spline Diameter and Number of Discs	Clutch Torque *must equal or exceed engine torque*	Damper Type	Manual Adjustment New	Manual Adjustment Severe Service*	Manual Adjustment Reman	Solo® Standard	Solo® Standard Severe Service*	Solo® Short Stroke	Solo® Reman	Solo® Maintenance-Free with Roller Yoke	Solo® Maintenance-Free with Roller Yoke Severe Service*
1.75" - 1	620	Free Travel	107683-5 (3 SB)	N/A	107683-5MO (3 SB)	109400-5 (3 SB)	N/A	N/A	109400-5MO	109410-5Y (3 SB)	N/A
1.75" - 2**	860	7 + 1	107237-10 (3 Trap) Supersedes 107237-8	107237-22 (3 SB)	107237-10MO Supersedes 107137-8MO	109500-10 (3 Trap) Supersedes 109500-8	109500-22 (3 SB)	N/A	109500-10MO Supersedes 109500-8MO	109507-10Y (3 Trap) Supersedes 109507-8Y	109507-22Y (3 SB)
2.00" - 2**	860	7 + 1	107342-12 (3 SB) Supersedes 107342-4 or -11	107342-22 (3 SB)	N/A	109504-12 (3 SB) Supersedes 109504-8	109504-22 (3 SB)	N/A	N/A	109508-12Y (3 SB)	109508-24Y (4 SB)
	950	7 + 1	N/A	N/A	N/A	109504-24 (4 SB)	N/A	N/A	N/A	109508-24Y (4 SB)	N/A
	1050	Low Rate	N/A	N/A	N/A	109504-20 (4 SB)	N/A	N/A	N/A	109508-20Y (4 SB)	N/A

Short Stroke: .410" to .470" Bearing Travel

Spline Diameter and Number of Discs	Clutch Torque *must equal or exceed engine torque*	Damper Type	Manual Adjustment New	Manual Adjustment Severe Service*	Manual Adjustment Reman	Solo® Standard	Solo® Standard Severe Service*	Solo® Short Stroke	Solo® Reman	Solo® Maintenance-Free with Roller yoke	Solo® Maintenance-Free with Roller Yoke Severe Service*
1.75" - 1	620	Free Travel	N/A	N/A	N/A	N/A	N/A	109404-5 (3 SB)	109404-5MO	N/A	N/A
1.75" - 2**	860	7 + 1	N/A	N/A	N/A	N/A	N/A	109503-10 (3 Trap)	109503-10MO	N/A	N/A

***Severe Service:** A combination of higher plate load, super buttons, or an additional number of facings.

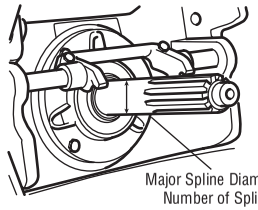
****Two Plate Clutches:** Fits in place of single plate (pull type), however, this increases inertia to the transmission and may affect shiftability and longevity.

NOTE: 7+1 Dampers replace free travel and soft rate dampers in 2 plate applications up to 950 ft. lbs. torque.

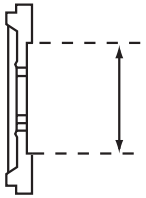
Eaton® Fuller® Heavy-Duty Clutch Selector

1 You MUST know these three *specs* to use this chart:

Spline Diameter



Flywheel Bore Opening (15.5" only)



Engine Torque

The Clutch Torque Rating listed in the chart must equal or exceed your Engine Torque Rating

Additional options that are in the chart:

Disc Type

D CF CO

D = Dampened

CF = Ceramic Facing
OF = Organic Facing

CO = Coaxial
FT = Free Travel
SD = Super Duty
VCT = Vibration Control Technology

Cover Type

AF
Adjustment-Free
AFG
Adjustment-Free
Greaseable Bearing
MG
Manual Adjust w/
Greaseable Bearing

New or Reman?

New
- Longer Service Life
- Less Downtime

Remanufactured
- Economy
- Longer Service Life Compared to Rebuilt

2 Narrow down your choices starting with Clutch Diameter (15.5" or 14")

3 The part numbers along any horizontal row are alternatives for the specifications

15.5 Inch Cast Two Plate Heavy-Duty

Spline Diameter and No. of Splines	Flywheel Bore Opening	Number of Springs	Clutch Torque *(must exceed engine torque)*	Disc Type	Facing Number	Cover Load	Spring Color	Weight Each	New: Easy-Pedal 2000™ w/o Brake MG	New: Solo® Standard Yoke AFG	New: Solo® XL Roller Yoke AFG	Remanufactured: Solo® AFG	Remanufactured: Easy-Pedal™ New Int Plate MG	Remanufactured: Easy-Pedal™ Reground Plate MG	ValueLine™: ValueClutch™ MG
2" - 10	7"	8	1400	DCF-CO-FT	4	3200	White	150							107091-80B
					4	3600	White	150	108391-81	109701-81			108391-81MO	108391-81MR	107091-81B
				DOF-CO-FT	Organic	4000	White	150	108391-82				108391-82MO	108391-82MR	
	8.5"	10	1450	DOF-CO-FT	Organic	4000	Plain	150	108391-78						
			1650	DCF-CO-FT	4	3600	Plain	150	108391-74	109701-74		109700-74MO	108391-74 MO	108391-74MR	107091-74B
	10"	9	1650	DCF-CO	4	3600	Blue	150	108935-51*	109700-51*			108935-51MO*		107935-51B*
			1760	DCF-CO	4	3600	Red	150	108935-61*	109700-61*		109700-61MO*			
		7	1700	DCF	4	3600	Plain	150	108925-82	109701-82	109705-82Y	109700-82MO	108935-82MO**		
		7	1860	DCF-VCT Plus	6	4000	Red	150	108925-20	109701-20	109705-20Y	109700-20MO			
			2050	DCF-VCT Plus	6	4000	White	150	108925-25	109701-25	109705-25Y				
2" - 14	10"	7	2250	DCF-VCT Plus	6	4000	Green	150			109706-32Y				

14 Inch Cast Two Plate Heavy-Duty

Spline Diameter and No. of Splines	Flywheel Bore Opening	Number of Springs	Clutch Torque *(must exceed engine torque)*	Disc Type	Facing Number	Cover Load	Spring Color	Weight Each	New: Easy-Pedal Plus® w/o Brake MG	New: Solo® Standard Yoke MG	New: Solo® XL Roller Yoke MG	Remanufactured: Solo® MG	Remanufactured: Easy-Pedal™ New Int Plate MG	Remanufactured: Easy-Pedal™ Reground Plate MG	ValueLine™: ValueClutch™ MG
2" - 10	7"	8	1000	DCF-CO-FT	3	2800	White	110	108034-61B	NA	NA	NA	108034-61MO	108034-61MR	107034-61B
			1150	DOF-CO-FT	Organic	3600	White	110	108034-82B				108034-82MO	108034-82MR	
			1400	DCF-CO-FT-SD	4	3200	White	110	108050-59B				108050-59MO	108050-59MR	107050-59B

* Dual Zerk-Mack engines only ** Dual Zerk

NOTE: VCT 6 spring design replaced by VCT Plus 7 spring design.

NOTE: "B" suffix removed from Easy-Pedal 2000. Installation does not change.

EASY-PEDAL PLUS® 14"

INSTALLATION WITHOUT BRAKES & PINS

Part No. By Spline 1-3/4"-10	Part No. By Spline 2"-10	Cover Type	Cover Load	Disc Type	Facing No.	Spring Color	Spring Qty.	Wt. Each	Torque Rating (lb-ft)	
	108034-61B	MG	2800	DCF-CO-FT	(3)	White	8	110	1000	7"
	108034-82B	MG	3600	DOF-CO-FT	–	White	8	110	1150	7"
108063-59	108050-59B	MG	3200	DCF-CO-FT-SD	(4)	White	8	110	1400	7"

EASY-PEDAL™ 2000 15.5"

INSTALLATION WITHOUT BRAKE

Part No. By Spline 2"-10	Cover Type	Cover Load	Disc Type	Facing No.	Spring Color	Spring Qty.	Wt. Each	Torque Rating (lb-ft)	Flywheel Bore Opening
108391-74	MG	3600	DCF-CO-FT	(4)	Plain	10	150	1650	8.5"
108391-78	MG	4000	DOF-CO-FT	–	Plain	10	150	1450	8.5"
108391-81	MG	3600	DCF-CO-FT	(4)	White	8	150	1400	7"
108391-82	MG	4000	DOF-CO-FT	–	White	8	150	1400	7"
108925-20	MG	4000	DCF-VCT Plus	(6)	Red	7	150	1860	10"
108925-25	MG	4000	DCF-VCT Plus	(6)	White	7	150	2050	10"
108925-82	MG	3600	DCF	(4)	Plain	7	150	1700	10"

STAMPED ANGLE SPRING® 14"

INSTALLATION

Part No. By Spline 1-3/4"-10	Part No. By Spline 2"-10	Cover Type	Cover Load	Disc Type	Facing No.	Spring Color	Spring Qty.	Wt. Each	Torque Rating (lb-ft)
SINGLE PLATE									
107683-5		MG	3000	DCF-CO-FT	3SB	White	8	70	620
TWO PLATE (WITH ADAPTER RING & INTERMEDIATE PLATE)									
107237-10		MG	2000	DCF-CO-LR-LI	3ST	Plain	7+1	100	860
107237-22		MG	2400	DCF-CO-LR	3SB	Plain	7+1	100	860
	107342-12	MG	2000	DCF-CO-LR	3SB	Plain	7+1	100	860

SOLO® HEAVY-DUTY 15.5"

INSTALLATION WITHOUT BRAKE

Part No. By Spline 2"-10	Cover Type	Cover Load	Disc Type	Facing No.	Spring Color	Spring Qty.	Wt. Each	Torque Rating (lb-ft)	Flywheel Bore Opening
109701-20	AFG	4000	DCF-VCT Plus	(6)	Red	7	150	1860	10"
109701-25	AFG	4000	DCF-VCT Plus	(6)	White	7	150	2050	10"
109701-74	AFG	3600	DCF-CO-FT	(4)	Plain	10	150	1650	8.5"
109701-82	AFG	3600	DCF	(4)	Plain	7	150	1700	10"
109705-82Y*	AFG	3600	DCF	(4)	Plain	7	150	1700	10"

* Includes Yoke

SOLO® MEDIUM-DUTY 14"

INSTALLATION

Part No. By Spline 1-3/4"-10	Part No. By Spline 2"-10	Cover Type	Cover Load	Disc Type	Facing No.	Spring Color	Spring Qty.	Wt. Each	Torque Rating (lb-ft)
SINGLE PLATE									
109400-5		AFG	3000	DCF-CO-FT	3SB	White	8	70	620
109404-5*		AFG	3000	DCF-CO-FT	3SB	White	8	70	620
TWO PLATE (WITH ADAPTER RING & INTERMEDIATE PLATE)									
109500-10		AFG	2000	DCF-CO-LR-LI	3ST	Plain	7+1	100	860
109500-22		AFG	2400	DCF-CO-LR	3SB	Plain	7+1	100	860
	109504-24	AFG	2400	DCF-CO-LR	4SB	Plain	7+1	100	950

* Short Stroke

ANGLE-RING® 310MM

(INSTALLATION FOR DIESEL ENGINES)

Part No. By Spline 1-1/4"-10	Part No. By Spline 1-1/2"-10	Cover Type	Cover Load	Disc Type	Facing No.	Spring Color	Spring Qty.	Wt. Each	Torque Rating (lb-ft)
107605-1	107606-1	Cast	2400	DCF	(4)	Blue Stripe	6	40	400
	107616-4	Ductile	2400	DCF	(4)	Blue Stripe	6	40	400

Note: GM requires ductile iron

ANGLE-RING® 330MM

(INSTALLATION FOR GAS ENGINES)

Part No. By Spline 1-3/8"-10	Cover Type	Cover Load	Disc Type	Facing No.	Spring Color	Spring Qty.	Wt. Each	Torque Rating (lb-ft)
107943-3	Cast	2400	DCF	(4)	Green Stripe	6	40	450

ANGLE-RING® 350MM

(INSTALLATION FOR DIESEL ENGINES)

Part No. By Spline 1-1/2"-10	Cover Type	Cover Load	Disc Type	Facing No.	Spring Color	Spring Qty.	Wt. Each	Torque Rating (lb-ft)
107350-4*	Cast	2400	DCF-FT	(4)	Yellow	8	46	500
107620-1	Ductile	2400	DCF-FT	(4)	Yellow	8	46	500
107621-1	Cast	2400	DCF-FT	(4)	Yellow	8	46	500
107621-7**	Cast	2400	DCF-FT	(4)	Yellow	8	46	500

*Includes release bearing to fit MS or Sc 200 or 250 Mack Midliner with Spicer® Transmissions

**Includes release bearing for Freightliner Business Class only

Note: GM requires ductile iron

WARNING: If clutch torque rating does not exceed engine torque rating, premature failure may occur and warranty will be void. See engine guide for torque rating, see pages 16-21.

VALUE CLUTCH™ 14"

INSTALLATION WITHOUT BRAKE AND PINS

Part No. By Spline 2"-10	Cover Type	Cover Load	Disc Type	Facing No.	Spring Color	Spring Qty.	Wt. Each	Torque Rating (lb-ft)	Flywheel Bore Opening
107034-30B	MG	3200	ROF	–	–	–	110	1000	7"
107034-32B	MG	3200	DOF	–	Red	8	110	900	7"
107034-57B	MG	3200	DOF-CO-FT	–	White	8	110	1000	7"
107034-61B	MG	2800	DCF-CO-FT	(3)	White	8	110	1000	7"
107050-59B	MG	3200	DCF-CO-FT-SD	(4)	White	8	110	1400	7"

VALUE CLUTCH™ 15.5"

INSTALLATION WITHOUT BRAKE

Part No. By Spline 2"-10	Cover Type	Cover Load	Disc Type	Facing No.	Spring Color	Spring Qty.	Wt. Each	Torque Rating (lb-ft)	Flywheel Bore Opening
107091-74B	MG	3600	DCF-CO-FT	(4)	Plain	10	150	1650	8.5"
107091-77B	MG	3600	DOF-CO-FT	–	White	8	150	1250	7"
107091-80B	MG	3200	DCF-CO-FT	(4)	White	8	150	1400	7"
107091-81B	MG	3600	DCF-CO-FT	(4)	White	8	150	1400	7"
107091-83B	MG	3200	DOF-CO-FT	–	White	8	150	1070	7"
107935-51B*	MG	3600	DCF-CO	(4)	Blue	9	150	1650	10"

* Dual Zerk - MACK Engines Only

EASY-PEDAL™ REMANUFACTURED 14"

Part No. By Spline 2"-10	Cover Type	Cover Load	Disc Type	Facing No.	Spring Color	Spring Qty.	Wt. Each	Torque Rating (lb-ft)	Flywheel Bore Opening
WITH GROUND INTERMEDIATE PLATE									
108034-61MR	MG	2800	DCF-CO-FT	(3)	White	8	110	1000	7"
108034-82MR	MG	3600	DOF-CO-FT	–	White	8	110	1150	7"
108050-59MR	MG	3200	DCF-CO-FT-SD	(4)	White	8	110	1400	7"
WITH NEW INTERMEDIATE PLATE									
108034-61MO	MG	2800	DCF-CO-FT	(3)	White	8	110	1000	7"
108034-82MO	MG	3600	DOF-CO-FT	–	White	8	110	1150	7"
108050-59MO	MG	3200	DCF-CO-FT-SD	(4)	White	8	110	1400	7"

NOTE: All reman clutch installations do not include clutch brakes or drive pins.

WARNING: If clutch torque rating does not exceed engine torque rating, premature failure may occur and warranty will be void. See engine guide for torque rating, see pages 16-21.

EASY-PEDAL™ REMANUFACTURED 15.5"

Part No. By Spline 2"-10	Cover Type	Cover Load	Disc Type	Facing No.	Spring Color	Spring Qty.	Wt. Each	Torque Rating (lb-ft)	Flywheel Bore Opening
WITH GROUND INTERMEDIATE PLATE									
108391-74MR	MG	3600	DCF-CO-FT	(4)	Plain	10	150	1650	8.5"
108391-81MR	MG	3600	DCF-CO-FT	(4)	White	8	150	1400	7"
108391-82MR	MG	4000	DOF-CO-FT	–	White	8	150	1400	7"
WITH NEW INTERMEDIATE PLATE									
108391-74MO	MG	3600	DCF-CO-FT	(4)	Plain	10	150	1650	8.5"
108391-81MO	MG	3600	DCF-CO-FT	(4)	White	8	150	1400	7"
108391-82MO	MG	4000	DOF-CO-FT	–	White	8	150	1400	7"
108935-51MO**	MG	3600	DCF-CO	(4)	Blue	9	150	1650	10"
108935-82MO*	MG	3600	DCF	(4)	Plain	7	150	1700	10"

NOTE: All reman clutch installations do not include clutch brakes or drive pins.
*Dual Zerk
**Dual Zerk - MACK Engines Only

STAMPED ANGLE SPRING® REMANUFACTURED 14"

Part No. By Spline 1-3/4"-10	Cover Type	Cover Load	Disc Type	Facing No.	Spring Color	Spring Qty.	Wt. Each	Torque Rating (lb-ft)
SINGLE PLATE								
107683-5MO	MG	3000	DCF-CO-FT	3SB	White	8	70	620
TWO PLATE								
107237-10MO	MG	2000	DCF-CO-LR-LI	3ST	Plain	7+1	100	860
107237-16MO	MG	2800	DOF-CO-FT	-	White	8	100	800
TWO PLATE WITH REGROUND INTERMEDIATE PLATE								
107237-10MR	MG	2000	DCF-CO-LR-LI	3ST	Plain	7+1	100	860

NOTE: All reman clutch installations do not include clutch brakes or drive pins.

SOLO® HEAVY-DUTY REMANUFACTURED 15.5"

Part No. By Spline 2"-10	Cover Type	Cover Load	Disc Type	Facing No.	Spring Color	Spring Qty.	Wt. Each	Torque Rating (lb-ft)	Flywheel Bore Opening
WITH NEW INTERMEDIATE PLATE*									
109700-20MO	AFG	4000	DCF-VCT Plus	(6)	Red	7	150	1860	10"
109700-61MO**	AFG	3600	DCF-CO	(4)	Red	9	150	1650	10"
109700-74MO	AFG	3600	DCF-CO-FT	(4)	Plain	10	150	1650	8.5"
109700-82MO	AFG	3600	DCF	(4)	Plain	7	150	1700	10"

NOTE: All reman clutch installations do not include clutch brakes or drive pins.
*All clutches are dual zerk
**MACK Engines Only

SOLO® MEDIUM-DUTY REMANUFACTURED 14"

Part No. By Spline 1-3/4"-10	Cover Type	Cover Load	Disc Type	Facing No.	Spring Color	Spring Qty.	Wt. Each	Torque Rating (lb-ft)
SINGLE PLATE								
109400-5MO	AFG	3000	DCF-CO-FT	3SB	White	8	70	620
109404-5MO*	AFG	2800	DCF-CO-FT	3SB	White	8	70	620
WITH NEW INTERMEDIATE PLATE-TWO PLATE								
109500-10MO	AFG	2000	DCF-CO-LR-LI	3ST	Plain	7+1	100	860
109503-10MO*	AFG	2150	DCF-CO-LR-LI	3ST	Plain	7+1	100	860

*Short Stroke

NOTE: All reman clutch installations do not include clutch brakes or drive pins.

BRAKES & PINS

CLUTCH BRAKES

Part No. By Spline 1-3/4"-10	Part No. By Spline 2"-10	Description
	127200	Kwik-Konnect®
127740	127760	Torque Limiting

DRIVE PINS

Part No.	Description
274C6	Drive Pin *

*Order in Multiples of 6

LUBE TUBE™

Part No.	Description
CLT008P	8" Length

WARNING: If clutch torque rating does not exceed engine torque rating, premature failure may occur and warranty will be void. See engine guide for torque rating, see pages 16-21.

14" (2"-10) Easy-Pedal and Value Clutch

Solo® New	Solo® Reman	Easy-Pedal™ New	Easy-Pedal™ Reman*	Value Clutch™ New	Cover Type	Disc Type
		108034-61B	108034-61MO,MR	107034-61B	MG	DCF-CO-FT(8)
		108034-82B	108034-82MO,MR		MG	DOF-CO-FT(8)
		108050-59B	108050-59MO,MR	107050-59B	MG	DCF-CO-FT SD(8)
				107034-57B	MG	DOF-CO-FT(8)
				107034-30B	MG	ROF
				107034-32B	MG	DOF(8)

15.5" (2"-10) Easy Pedal and Value Clutch

Solo® New	Solo® Reman	Easy-Pedal™ New	Easy-Pedal™ Reman*	Value Clutch™ New	Cover Type	Disc Type
109701-20*	109700-20MO*	108925-20			AFG/MG	DCF-VCT Plus(7)
109701-25*		108925-25			AFG/MG	DCF-VCT Plus(7)
109701-74*	109700-74MO*	108391-74	108391-74MO,MR	107091-74B	AFG/MG	DCF-CO-FT(10)
				107091-77B	MG	DOF-CO-FT(8)
		108391-78			MG	DOF-CO-FT(10)
				107091-80B	MG	DCF-CO-FT(8)
		108391-81	108391-81MO,MR	107091-81B	MG	DCF-CO-FT(8)
109701-82*	109700-82MO*	108391-82	108391-82MO,MR		AFG/MG	DOF-CO-FT(8)
				107091-83B	MG	DOF-CO-FT(8)
			108935-51MO,MR	107935-51B	MG	DCF-CO(9)
		108925-82	108935-82MO,MR		MG	DCF(7)
109705-82Y*					AFG	DCF-CO-FT(7)
	109700-61MO*				AFG	DCF-CO(9)

*Adjustment Free/Greaseable Bearing

14" (1-$^{3}/_{4}$"-10) Stamped Angle

Solo® New	Solo® Reman	Stamped Angle Spring New	Stamped Angle Spring Reman*	Cover Type	Disc Type
109400-5**	109400-5MO**	107683-5	107683-5MO	AFG/MG	DCF-CO-FT(8)
109404-5*/**	109404-5MO**			AFG	DCF-CO-FT(8)
109500-10**	109500-10MO**	107237-10	107237-10MO, MR	MG	DCF-CO-LR-LI(7+1)
			107237-16MO	MG	DOF-FT(8)
109500-22**		107237-22		AFG/MG	DCF-CO-LR(7+1)
109503-10*/**	109503-10MO*/**			AFG	DCF-CO-LR-LI(7+1)

*Short Stroke

**Adjustment Free/Greaseable Bearing

14" (2"-10) Stamped Angle

Solo® New	Solo® Reman	Stamped Angle Spring New	Stamped Angle Spring Reman*	Cover Type	Disc Type
		107342-12		MG	DCF-CO-LR-LI(7+1)
109504-24**				AFG	DCF-CO-LR(7+1)

**Adjustment Free/Greaseable Bearing

Note: Always read comments in column.
Note: DOF = Organic DCF = Ceramic
Note: Sealed "XL" Lube @ 100,000 Miles

Meritor (Rockwell) 14" Clutches

Rockwell Old No.	Rockwell New No.	Max. (ft.lbs)	Plate Load (lbs.)	Disc Type	Bearing Type	Eaton® Fuller® No.	Comments
R140150	R140151	1130	3200**	DOF	Greaseable	108034-82	Rated to 1150 ft. lbs.
R140400*	R140401	1400	3200	DCF	Greaseable	108050-59	Rated to 1400 ft. lbs.
R140450*	R140451	1130	3200**	DOF	Greaseable	108034-82	Rated to 1150 ft. lbs.
R141100	R141101	1400	3200	DCF	Greaseable	108050-59	Rated to 1400 ft. lbs.
R142150	R141151	1130	3200	DOF	Sealed-XL**	108034-82	Rated to 1150 ft. lbs.
R143100	R14100	1400	3200	DOF	Sealed	108550-82	Rated to 1400 ft. lbs.

* Free Travel Damper
** Eaton replacement does not match the specification. Where available, offer equivalent Solo option.

Other Clutches

Rockwell Old No.	Rockwell New No.	Max. (ft.lbs)	Plate Load (lbs.)	Disc Type	Bearing Type	Eaton® Fuller® No.	Comments
R155600(1)	R151725	1490	3200**	DCF	Greaseable	108935-51	3600 PL Dual Zerk/Mack
R156600(1)	R152725	1730	3600**	DCF	Greaseable	108935-15	4000 PL VCT Dual Zerk/Mack
						108935-51	
R157600(1)	R159705	1150	2800	DCF	Sealed-XL**	108925-80	3200 PL, 4 Paddle - Not Sealed
R158600(1)	R155705	1490**	3200	DCF	Sealed-XL**	108925-80	1450 ft Lbs. Max. - Not Sealed
						108925-82	
R159600(1)	R156705	1730**	3600	DCF	Sealed-XL**	108925-82	1700 ft Lbs. Max. 4 Paddle - Not Sealed
R152650	R157705	1860**	3600	DCF-7	Sealed-XL**	108925-20	VCT 6 Paddle - Not Sealed
NA	R157755	2050**	4000	DCF-7	Sealed-XL**	108925-25	VCT 6 Paddle - Not Sealed

* Free Travel Damper
** Eaton replacement does not match the specification. Where available, offer equivalent Solo option.
(1) LTD Damper - requires 10.125" Flywheel opening

Meritor (Rockwell) 15" Clutches

Rockwell Old No.	Rockwell New No.	Max. (ft.lbs)	Plate Load (lbs.)	Disc Type	Bearing Type	Eaton® Fuller® No.	Comments
R150105	R151406	1490**	3200**	DCF	Greaseable	108391-74	10 Spring (8.5" Flywheel) 1650 ft. lbs. Max.
R150155	R151456	1450**	3600**	DOF	Greaseable	108391-78	10 Spring (8.5" Flywheel) 1450 ft. lbs. Max. Do Not Use in 10" Flywheel
R150600*	R150705	1150	2800	DCF	Greaseable	108925-84	Series 50 Detroit Diesel
R151105	R151105	1730**	3600	DCF	Greaseable	108391-74	10 Spring (8.5" Flywheel) 1650 ft. lbs. Max.
R151150	R151456	1310**	3200**	DOF	Greaseable	108391-78	10 Spring (8.5" Flywheel) 1450 ft. lbs. Max. Do Not Use in 10" Flywheel
R151155	R151456	1450	3600**	DOF	Sealed	108391-78	10 Spring (8.5" Flywheel) 1450 ft. lbs. Max. Do Not Use in 10" Flywheel
R151405*	R151406	1730**	3600	DCF	Greaseable	108391-74	10 Spring (8.5" Flywheel) 1650 ft. lbs. Max.
R151455*	R151456	1450**	3600**	DOF	Greaseable	108391-78	10 Spring (8.5" Flywheel) 1450 ft. lbs. Max. Do Not Use in 10" Flywheel
R151600(1)	R154705	1150	2800	DCF	Sealed-XL**	108925-82	7 Spring 3600 lbs. Rated to 1700 ft. lbs. (10" Flywheel Bore)
R151650(1)	R153705	1860	3600**	DCF	Greaseable	108925-10	6 SP VCT 4000 lbs. Rated to 1860 ft. lbs. (10" Flywheel Bore)
R152105	R151406	1730**	3600	DCF	Sealed	108391-74	10 Spring (8.5" Flywheel) 1650 ft. lbs. Max.
R152455*	R151456	1450**	3600	DOF	Sealed	108391-78	10 Spring (8.5" Flywheel) 1450 ft. lbs. Max. Do Not Use in 10" Flywheel
R152600(1)	R151705	1490**	3200	DCF-7	Greaseable	108925-82	7 Spring 3600 lbs. Rated to 1700 ft. lbs. (10" Flywheel Bore)
R153105	R151406	1490**	3200	DCF	Sealed	108391-74	10 Spring (8.5" Flywheel) 1650 ft. lbs. Max. Not Sealed Bearing
R153405*	R151406	1730**	3600	DCF	Sealed	108391-74	10 Spring (8.5" Flywheel) 1650 ft. lbs. Max. Not Sealed Bearing
R153600(1)	R152705	1730**	3600	DCF	Greaseable	108925-82	7 Spring 3600 lbs. Rated to 1700 ft. lbs. (10" Flywheel Bore)
R154150	R151456	1310**	3200**	DOF	Sealed	108891-78	10 Spring (8.5" Flywheel) 1450 ft. lbs. Max. Do Not Use in 10" Flywheel
R154600(1)	R158705	1150	2800	DCF	Greaseable	108925-84	Detroit Diesel 50 Series

**Eaton replacement does not match the specification. Where available, offer equivalent Solo option.

* Free Travel Damper

(1) LTD Damper - requires 10.125" Flywheel opening

ENGINE HORSEPOWER/TORQUE RATINGS

(INDEXED BY HORSEPOWER)

NOTE: VARIABLE HORSEPOWER ENGINES--RATE TO HIGHEST HP/TORQUE

CAT Torque Chart

Model	HP/@RPM	Torque/@ RPM	Model	HP/@RPM	Torque/@ RPM
3116	185 @ 2200	520 @ 1560	3208T(MD)	250 @ 2600	640 @ 1400
3116	185 @ 2600	495 @ 1560	3208T(MD)	200 @ 2000	620 @ 1400
3116	185 @ 2600	520 @ 1560	3306	245 @ 2100	860 @ 1350
3116	195 @ 2200	521 @ 1560	3306	245 @ 2200	820 @ 1300
3116	215 @ 2200	605 @ 1560	3306	250 @ 1800	860 @ 1350
3116	230 @ 2200	660 @ 1560	3306	260 @ 1900	860 @ 1350
3116	250 @ 2200	660 @ 1560	3306	270 @ 2200	775 @ 1400
3116	275 @ 2200	750 @ 1560	3306C	300 @ 1900	1150 @ 1200
3116(GM '91UP)	215 @ 2600	605 @ 1560	3406	250 @ 1600	1000 @ 1200
3116(GM MD)	275 @ 2450	735 @ 1560	3406	280 @ 2100	1015 @ 1200
3116(GM-MD)	250 @ 2600	650 @ 1560	3406	290 @ 1800	1000 @ 1200
3116(GM-MD)	300 @ 2600	732 @ 1560	3406	300 @ 2100	1054 @ 1200
3116(HEUI)	170 @ 2200	420 @ 1560	3406	310 @ 1800	1090 @ 1200
3116(MD)	170 @ 2600	420 @ 1560	3406	325 @ 2100	1050 @ 1200
3116(MD)	200 @ 2600	520 @ 1560	3406	330 @ 1600	1320 @ 1200
3126	175 @ 2400	420 @ 1440	3406	380 @ 2100	1285 @ 1200
3126	190 @ 2200	520 @ 1440	3406	400 @ 1900	1450 @ 1250
3126	210 @ 2200	605 @ 1440	3406	435 @ 1800	1550 @ 1650
3126	210 @ 400	520 @ 1440	3406	455 @ 1800	1460 @ 1200
3126	230 @ 2200	660 @ 1440	3406	455 @ 2100	1650 @ 1200
3126	250 @ 2200	660 @ 1440	3406	475 @ 2100	1650 @ 1750
3126	250 @ 2200	800 @ 1440	3406	500 @ 2100	1450 @ 1850
3126	275 @ 2200	800 @ 1440	3406	500 @ 2100	1450 @ 1200
3126	275 @ 2200	860 @ 1440	3406	500 @ 2100	1850 @ 1200
3126	300 @ 2200	800 @ 1440	3406	550 @ 2100	1850 @ 1200
3126	300 @ 2200	860 @ 1440	3406	510 @ 1600	1850 @ 1200
3126B	175 @ 2200	420 @ 1440	3406B	350 @ 2100	1320 @ 1200
3126B	190 @ 2200	520 @ 1440	3406B	400 @ 2100	1375 @ 1260
3126B	210 @ 2400	605 @ 1440	3406B	425 @ 2100	1450 @ 1200
3126B	210 @ 2400	520 @ 1440	3406BEC	350 @ 1800	1320 @ 1200
3126B	230 @ 2200	660 @ 1440	3406BEC	400 @ 2100	1265 @ 1300
3126B	250 @ 2200	660 @ 1440	3406C	350 @ 1800	1350 @ 1200
3126B	250 @ 2200	800 @ 1440	3406C	350 @ 1800	1350 @ 1200
3126B	275 @ 2200	800 @ 1440	3406C	425 @ 1800	1550 @ 1200
3126B	275 @ 2200	860 @ 1440	3406C	425 @ 1900	1650 @ 1200
3126B	300 @ 2200	800 @ 1440	3406E	310 @ 1800	1150 @ 1200
3126B	300 @ 2200	860 @ 1440	3406E	310 @ 1800	1250 @ 1200
3126B	330 @ 2400	860 @ 1440	3406E	330 @ 1800	1350 @ 1200
3176 ATAAC	250 @ 2100	975 @ 1300	3406E	375 @ 1800	1450 @ 1200
3176 ATAAC	275 @ 1800	1050 @ 1100	3406E	410 @ 1800	1450 @ 1200
3176 ATAAC	275 @ 2100	1050 @ 1200	3406E	435 @ 1800	1550 @ 1200
3176 ATAAC	300 @ 1800	1150 @ 1100	3406E	435 @ 2100	1550 @ 1200
3176 ATAAC	300 @ 2100	1150 @ 1300	3406E	435 @ 2100	1650 @ 1200
3176 ELEC	275 @ 1800	975 @ 1100	3406E	475 @ 1800	1650 @ 1200
3176 ELEC	275 @ 1800	1050 @ 1100	3406E	475 @ 1800	1750 @ 1200
3176 ELEC	300 @ 1800	975 @ 1100	3406E	475 @ 2100	1650 @ 1200
3176 ELEC	300 @ 1800	1050 @ 1100	3406E	475 @ 2100	1750 @ 1200
3176ATAAC	230 @ 1800	975 @ 1100	3406E	550 @ 1800	1850 @ 1200
3176ATAAC	325 @ 1900	1225 @ 1200	3406E (94)	500 @ 1800	1850 @ 1200
3176B	275 @ 1800	1050 @ 1100	3406E MULTI TQ	310 @ 1800	1150/1350 @ 1200
3176B	300 @ 1800	1050 @ 1100	3406E MULTI TQ	355 @ 1800	1350/1450 @ 1200
3176B	325 @ 1800	1250 @ 1200	3406E MULTI TQ	375 @ 1800	1450/1550 @ 1200
3176B	350 @ 1800	1350 @ 1200	3406E MULTI TQ	375/435 @ 1800	1450/1550 @ 1200

CAT Torque Chart (Continued)

Model	HP/@RPM	Torque/@ RPM
3406E(94)	355 @ 1800	1350 @ 1200
3406E(94)	375 @ 1800	1550 @ 1200
3406E(94)	410 @ 1800	1550 @ 1200
3406E(94)	435 @ 1800	1650 @ 1200
3406E(94)	475 @ 1800	1750 @ 1200
3408	420 @ 1900	1460 @ 1200
3408	450 @ 2100	1350 @ 1500
6CTA-250	250 @ 2200	720 @ 1300
C-10	280 @ 1800	1050 @ 11200
C-10	280 @ 2100	975 @ 1100
C-10	305 @ 1800	1150 @ 1100
C-10	305 @ 1800	1150 @ 1440
C-10	305 @ 1800	1150 @ 1440
C-10	305 @ 2100	1150 @ 1100
C-10	305 @ 2100	1050 @ 1440
C-10	305 @ 2100	1150 @ 1440
C-10	325 @ 2100	1250 @ 1200
C-10	335 @ 1800	1250 @ 1200
C-10	335 @ 1800	1350 @ 1200
C-10	335 @ 1800	1250 @ 1440
C-10	335 @ 1800	1350 @ 1440
C-10	335 @ 2100	1250 @ 1440
C-10	350 @ 1800	1350 @ 1200
C-10	350 @ 1800	1350 @ 1440
C-10	350 @ 2100	1350 @ 1440
C-10	370 @ 1800	1350 @ 1200
C-10	370 @ 1800	1350 @ 1440
C-10	335/370 @ 1800	1250/1350 @ 1440
C-10 MULTI	335/370 @ 1800	1250/1350 @ 1200
C-12	335 @ 2100	1550 @ 1200
C-12	355 @ 1800	1350 @ 1200
C-12	355 @ 1800	1350
C-12	355 @ 2100	1350
C-12	355/410 @ 1800	1350/1450
C-12	360 @ 2100	1350 @ 1200
C-12	380 @ 1800	1450 @ 1200
C-12	380 @ 1800	1450
C-12	380 @ 2100	1450
C-12	390 @ 2100	1450 @ 1200
C-12	395 @ 1800	1450
C-12	395 @ 2100	1450
C-12	410 @ 1800	1450 @ 1200
C-12	410 @ 1800	1550 @ 1200
C-12	410 @ 1800	1450
C-12	410 @ 1800	1550
C-12	410 @ 2100	1550 @ 1200
C-12	410 @ 2100	1450
C-12	410 @ 2100	1550
C-12	425 @ 2100	1450
C-12	425 @ 2100	1550
C-12	430 @ 1800	1650
C-12	430 @ 2100	1650
C-12 MULTI TQ	355/410 @ 1800	1350/1450 @ 1200
C-12 MULTI TQ	355/410 @ 1800	1350/1550 @ 1200
C-12 MULTI TQ	380/410 @ 1800	1450/1550 @ 1200
C-12 RCV/BUS	425 @ 2100	1450 @ 1200
C-15	355 @ 1800	1350-/1450
C-15	355 @ 1800/2100	1350
C-15	375 @ 1800	1450/1550
C-15	375 @ 1800/2100	1450
C-15	410 @ 1800/2100	1450/1550
C-15	435 @ 1800/2100	1550
C-15	435 @ 1800/2100	1650
C-15	450 @ 1800/2100	1550/1650
C-15	455 @ 1800/2100	1650
C-15	455 @ 2100	1550/1650
C-15	475 @ 1800/2100	1650
C-15	475 @ 1800/2100	1750
C-15	500 @ 1800/2100	1850
C-15	500 @ 2100	1650
C-15	500 @ 2100	1750
C-15	500 @ 2100	1750/1850
C-15	550 @ 2100	1850
C-15	375/435 @ 1800	1450/1550
C-15	435/500 @ 2100	1550/1650
C-15	475/500 @ 2100	1650/1750
C-15	475/500 @ 2100	1650/1850
C-16	575 @ 2100	1850
C-16	575/600 @ 2100	1850/2050
C-16	600 @ 2100	2050
G3306 CNG/LNG	235 @ 2100	800 @ 1200
G3306 LPG (HD5)	250 @ 2100	820 @ 1200

Cummins Torque Chart

Model	HP/@RPM	Torque/@ RPM	Model	HP/@RPM	Torque/@ RPM
444	444 @ 2100	1400 @ 1500	ISX 475	475 @ 2000	1850 @ 2000
4BT3.9	105 @ 2500	260 @ 1700	ISX 500	500 @ 2000	1650 @ 1200
4BTA3.9	120 @ 2500	304 @ 1700	ISX 500	500 @ 2000	1650/1850 @ 1200
6BT55.9	160 @ 2500	400 @ 1700	ISX 500	500 @ 2000	1850 @ 1200
6BTA5.9	190 @ 2500	475 @ 1600	ISX 530	530 @ 2000	1850 @ 1200
6BTA5.9	210 @ 2500	520 @ 1600	ISX 565	564 @ 2000	1850 @ 1200
6BTA5.9	230 @ 2500	605 @ 1600	ISX 600	600 @ 2000	1850 @ 1200
6CT8.3	210 @ 2200	605 @ 1500	KT 450	450 @ 2100	1350 @ 1500
6CTA8.3	240 @ 2200	645 @ 1500	KT 525	525 @ 2100	1650 @ 1300
6CTA8.3	250 @ 2200	728 @ 1500	KTA 600	600 @ 2100	1650 @ 1600
Fleet 270	270 @ 1600	1020 @ 1100	L10	260 @ 1800	975 @ 1200
Fleet 285	285 @ 1600	1150 @ 1100	L10	270 @ 1900	858 @ 1300
Fleet 300	300 @ 1700	1150 @ 1100	L10	270 @ 2100	858 @ 1400
Form 270	270 @ 1800	1000 @ 1300	L10	280 @ 1800	1050 @ 1200
Form 315	315 @ 1800	1150 @ 1300	L10	300 @ 2100	950 @ 1300
Form 350(90)	350 @ 1800	1175 @ 1300	L10 285PT	285 @ 2200	1020 @ 1300
Form 350(90)	350 @ 1800	1200 @ 1300	L10 310	310 @ 1800	1150 @ 1200
Form 365(90)	365 @ 1800	1325 @ 1300	L-10 240\250PT	240 @ 2100	900 @ 1300
Form 400	400 @ 1800	1250 @ 1300		250 @ 2200	
Form 450	450 @ 1900	1420 @ 1300	L10 330E	330 @ 1800	1250 @ 1200
Form.240	240 @ 1800	870 @ 1300	L10 Form	300 @ 1900	950 @ 1300
Form-300	300 @ 1800	1000 @ 1300	L-10 Form 240	240 @ 1900	860 @ 1300
Form-L10-240	240 @ 1400	858 @ 1300	L-10 STC 12CGA	260 @ 1600	975 @ 1200
Form-VT-350	300 @ 2100	860 @ 1400	L-10 STC 12CGB	260 @ 1700	975 @ 1200
ISB	145 @ 2600	420 @ 1600	L-10 STC 12CGC	280 @ 1600	1050 @ 1200
ISB	185 @ 2500	420 @ 1600	L-10 STC 12CGD	280 @ 1700	1050 @ 1200
ISB	190 @ 2600	520 @ 1400	L-10 STC 12CGG	310 @ 1600	1150 @ 1200
ISB	205 @ 2500	520 @ 1600	L-10 STC 12CGH	300 @ 1700	1150 @ 1200
ISB	210 @ 2600	520 @ 1400	L10-240	240 @ 1900	870 @ 1300
ISB	225 @ 2500	520 @ 1600	M-11	400 @ 1800	1450 @ 1200
ISB	225 @ 2500	605 @ 1600	M11 310E	310 @ 2000	1150 @ 1200
ISB	240 @ 2500	605 @ 1600	M11 330E	330 @ 2000	1350 @ 1200
ISB	245 @ 2500	660 @ 1600	M11 350E	350 @ 2000	1350 @ 1200
ISB	260 @ 2500	660 @ 1600	M11 370	370 @ 1800	1350 @ 1200
ISB	260 @ 2600	550 @ 19600	M11-280E	280 @ 1800	1050 @ 1200
ISC	225 @ 2400	620 @ 1300	M11ESP1	280-330 @ 1800	1050-1250 @ 1200
ISC	240 @ 2400	660 @ 1300	M11ESP11	310-370 @ 1800	1150 @ 1350
ISC	260 @ 2200	800 @ 1300	MII 280E Celect	280 @ 1800	1050 @ 1200
ISC	285 @ 2200	800 @ 1300	MII 280E Celect	280 @ 2000	1050 @ 1200
ISC	300 @ 2200	860 @ 1300	N14 310	310 @ 1800	1150 @ 1350
ISC	315 @ 2200	950 @ 1300	N14 330E	330 @ 2100	1350 @ 1200
ISL	310 @ 2100	1050 @ 1300	N14 410E	410 @ 2100	1450 @ 1200
ISL	330 @ 2100	1050 @ 1300	N14 435E	435 @ 2100	1650 @ 1200
ISM 320V	320 @ 2100	1150 @ 1200	N14 500E	500 @ 2100	1750 @ 1200
ISM 320VSP	320 @ 2100	1050/1150 @ 1200	N14 525	525 @ 1800	1850 @ 1200
ISM 350V	350 @ 2100	1350 @ 1200	N14 12 CEC	370 @ 1600	1400 @ 1200
ISM 350VSP	350 @ 2100	1350/1450 @ 1200	N14 12 CED	370 @ 1600	1400 @ 1200
ISM 400V	400 @ 2100	1450 @ 1200	N14 350E	350 @ 2100	1400 @ 1200
ISM 435V	435 @ 2100	1450 @ 1200	N14 370E	370 @ 2100	1450 @ 1200
ISM 435VSP	435 @ 2100	1450 @ 1550	N14 469E	460 @ 2100	1650 @ 1200
ISX 400	400 @ 1800	1450/1650 @ 1200	N14 500	500 @ 1800	1750 @ 1200
ISX 400	400 @ 1800	1550 @ 1200	N14 Celect 12 CDA/E	330 @ 1600	1350 @ 1100
ISX 400	400 @ 1800	1650 @ 1200	N14 Celect 12 CDB	370 @ 1600	1400 @ 1100
ISX 450	450 @ 1800	1450/1650 @ 1200	N14 Celect 12 CDC	430 @ 1700	1450 @ 1100
ISX 475	475 @ 2000	1650 @ 1200	N14 Celect 12 CDJ	460 @ 1700	1550 @ 1100
ISX 475	475 @ 2000	1650/1850 @ 1200	N14 Celect 12 CDK	310 @ 1600	1250 @ 1300

Cummins Torque Chart (Continued)

Model	HP/@RPM	Torque/@ RPM
N14 Celect 12 CDL	350 @ 1600	1400 @ 1100
N14 Celect 12 CDM	350 @ 1600	1350 @ 1100
N14 Celect 12 CDR	310 @ 1699	1450 @ 1200
N14 Celect 12 CDS	370 @ 1600	1550 @ 1200
N14 Celect 12 CEN	410 @ 1600	1450 @ 1200
N14 Celect 12 CEP	430 @ 1700	1550 @ 1300
N14 STC 12 CEE	410 @ 1600	1450 @ 1200
N14 STC 12 CEG	410 @ 1600	1450 @ 1200
N14 STC 12CEH	310 @ 1600	1250 @ 1100
N14 STC 12CEJ	350 @ 1600	1400 @ 1100
N14 STC 12CEK	350 @ 1600	1350 @ 1100
N14EAPI	310-390 @ 1800	1250 @ 1450
N14ESP3	400-460 @ 1800	1450 @ 1650
N14ESPII	350-390 @ 1800	1350 @ 1500
NHTC-220	220 @ 2100	644 @ 1500
NTC 315	315 @ 1800	1150 1300
NTC 350	350 @ 2100	1120 @ 1300
NTC 365	365 @ 1800	1320 @ 1300
NTC 475	475 @ 2100	1430 @ 1400
NTC300	300 @ 2100	1000 @ 1300
NTC350(90)	350 @ 2100	1200 @ 1300
NTC400	400 @ 2100	1250 @ 1300
NTC444XT	444 @ 2100	1400 @ 1500
NTC-Form400	400 @ 1800	1325 @ 1300
PT 270	270 @ 1800	1000 @ 1300
PT-240	240 @ 2100	900 @ 1300
SIGNATURE 600	600 @ 2000	2050 @ 1200
STC 12 CEA	330 @ 1600	1350 @ 1100
STC 12 CEB	330 @ 1600	1350 @ 1100
Twin Turbo	475 @ 2100	1430 @ 1400
V-903C	295 @ 2600	860 @ 1800

Detroit Diesel Torque Chart

Model	HP/@RPM	Torque/@ RPM
11.1 Litre	250 @ 1800	970 @ 1200
11.1 Litre	300 @ 1800	1150 @ 1200
11.1 Litre	330 @ 1800	1150 @ 1200
11.1 Litre	330 @ 1800	1250 @ 1200
11.1 Litre	350 @ 1800	1250 @ 1200
11.1 Litre	350 @ 1800	1250 @ 1200
11.1 Litre	365 @ 1800	1350 @ 1200
12.7 Litre	350 @ 2100	1400 @ 1200
12.7 Litre	370 @ 1800	1450 @ 1200
12.7 Litre	400 @ 1800	1450 @ 1200
12.7 Litre	425 @ 2100	1400 @ 1200
12.7 Litre	430 @ 1800	1450 @ 1200
12.7 Litre	470 @ 2100	1450 @ 1200
12.7 Litre	500 @ 1800	1550 @ 1200
12.7 Litre	430-470 @ 1800	1550 @ 1200
6-71	230 @ 2100	611 @ 1600
6-71T	275 @ 2100	853 @ 1200
6-71T	300 @ 2100	830 @ 1400
6-71TAC	270 @ 2100	786 @ 1200
6V92TA	330 @ 2100	963 @ 1200
6V92TA	350 @ 2100	1020 @ 1200
8V71	304 @ 2100	818 @ 1400
8V92 TAC	440 @ 2100	1250 @ 1300
8V92TA	400 @ 1800	1250 @ 1200
8V92TA	445 @ 2100	1250 @ 1300
8V92TA	475 @ 2100	1330 @ 1300
Series 50 8.5L-1L-4	250 @ 2100	780 @ 1200
Series 50 8.5L-1L-4	275 @ 2100	890 @ 1200
Series 50 8.5L-1L-4	300 @ 1800/2100	1000 @ 1200
Series 50 8.5L-1L-4L	315 @ 1800/2100	1150 @ 1200
Series 55 12L-1L-6	300 @ 1800	1100
Series 55 12L-1L-6	330 @ 1800/2000	1250 @ 1100
Series 55 12L-1L-6	350 @ 1800/2000	1350 @ 1100
Series 55 12L-1L-6	350 @ 1800/2000	1250/1350 @ 1100
Series 55 12L-1L-6	365 @ 1800/2000	1450 @ 1100
Series 55 12L-1L-6	330/350 @ 1800	1250 @ 1100
Series 55 12L-1L-6	330/350 @ 1800	1350 @ 1100
Series 55 12L-1L-6	365/400 @ 1800	1450 @ 1100
Series 60 11.1L-1L-6	300 @ 1800	1150 @ 1200
Series 60 11.1L-1L-6	330 @ 1800	1150 @ 1200
Series 60 11.1L-1L-6	330 @ 1800	1150 @ 1200
Series 60 11.1L-1L-6	350 @ 1800	1250 @ 1200
Series 60 11.1L-1L-6	350 @ 2100	1250 @ 1200
Series 60 11.1L-1L-6	350 @ 2100	1250 @ 1200
Series 60 11.1L-1L-6	365 @ 1800	1350 @ 1200
Series 60 11.1L-1L-6	300/330 @ 1800	1150 @ 1200
Series 60 11.1L-1L-6	330/350 @ 1800	1250 @ 1200
Series 60 11.1L-1L-6	330/365 @ 1800	1350 @ 1200
Series 60 12.7-1L-6	400 @ 1800	1450 @ 1200
Series 60 12.7-1L-6	400 @ 2100	1450 @ 1200
Series 60 12.7-1L-6	370/400 @ 1800	1450 @ 1200
Series 60 12.7L-1L-6	370 @ 1800	1450 @ 1200
Series 60 12.7L-1L-6	370 @ 2100	1450 @ 1200
Series 60 12.7L-1L-6	430 @ 1800	1450 @ 1200
Series 60 12.7L-1L-6	430 @ 2100	1450 @ 1200
Series 60 12.7L-1L-6	470 @ 1800	1550 @ 1200

Detroit Diesel Torque Chart (Continued)

Model	HP/@RPM	Torque/@ RPM
Series 60 12.7L-1L-6	470 @ 2100	1450/1550 @ 1200
Series 60 12.7L-1L-6	500 @ 1800	1550 @ 1200
Series 60 12.7L-1L-6	500 @ 2100	1450/1550 @ 1200
Series 60 12.7L-1L-6	370/430 @ 1800	1450 @ 1200
Series 60 12.7L-1L-6	370/430 @ 2100	1450 @ 1200
Series 60 12.7L-1L-6	430/470 @ 1800	1550 @ 1200
Series 60 12.7L-1L-6	430/470 @ 2100	1550 @ 1200
Series 92 9.05LV-6	300 @ 2100	975 @ 1200
Series 92 9.05LV-6	350 @ 2100	1020 @ 1200
Series 92 12.1LV-8	400 @ 2100	1330 @ 1200
Series 92 12.1LV-8	450 @ 2100	1425 @ 1200
Series 92 12.1LV-8	500 @ 2100	1470 @ 1200

Ford Torque Chart

Model	HP/@RPM	Torque/@ RPM
7.3L Hi.Alt.	165 @ 3000	325 @ 1600
7.3L Turbo	190 @ 3000	395 @ 1400
7.3L NatAsp	185 @ 3000	360 @ 1400
FD-1060	160 @ 2500	400 @ 1600
FD-1060	175 @ 2500	420 @ 1600
FD-1060	190 @ 2500	475 @ 1600
FD-1060	210 @ 2300	520 @ 1600
FD-1060	210 @ 2500	485 @ 1600
FD-1060	230 @ 2300	605 @ 1600
FD-1460	210 @ 2200	605 @ 1300
FD-1460	225 @ 2200	660 @ 1300
FD-1460	250 @ 2000	800 @ 1300
FD-1460	250 @ 2200	660 @ 1300
FD-1460	275 @ 1800	860 @ 1300
FD-1460	275 @ 2000	800 @ 1300

International Torque Chart

Model	HP/@RPM	Torque/@ RPM
530	250 @ 2200	800 @ 1300
530	275 @ 2200	860 @ 1300
530	300 @ 2200	950 @ 1300
444E	175 @ 2600	460 @ 1400
444E	195 @ 2600	520 @ 1400
444E	210 @ 2600	540 @ 1500
444E	215 @ 2600	560 @ 1400
444E	230 @ 2600	620 @ 1400
DT 408	175 @ 2600	430 @ 1800
DT 408	190 @ 2600	485 @ 1800
DT 408	210 @ 2600	520 @ 1800
DT 408	230 @ 2600	605 @ 1800
DT 466	195 @ 2400	520 @ 1600
DT 466	195 @ 2600	520 @ 1400
DT 466	210 @ 2400	605 @ 1600
DT 466	215 @ 2600	540 @ 1400
DT 466	215 @ 2600	560 @ 1400
DT 466	230 @ 2400	660 @ 1600
DT 466	230 @ 2600	620 @ 1400

Model	HP/@RPM	Torque/@ RPM
DT 466	250 @ 2400	660 @ 1600
DT 466	275 @ 2400	800 @ 1600
DT 466 HT	215 @ 2400	620 @ 1400
DT 466 HT	230 @ 2400	660 @ 1400
DT 466 HT	250 @ 2400	800 @ 1400
DT 530	275 @ 2200	800 @ 1200
DT 530	300 @ 2200	950 @ 1200
DT 530	330 @ 2200	950 @ 1200
HT 530	280 @ 2000	950 @ 1200
HT 530	300 @ 2000	1050 @ 1200
HT 530	320 @ 2000	1150 @ 1200
HT 530	340 @ 2000	1200 @ 1200
T444E	160 @ 2600	400 @ 1500
T444E	175 @ 2600	430 @ 1500
T444E	190 @ 2600	485 @ 1500
VT 365	175 @ 2600	460 @ 1400
VT 365	195 @ 2600	520 @ 1400
VT 365	215 @ 2600	540 @ 1400
VT 365	230 @ 2600	620 @ 1400

Mack Torque Chart

Model	HP/@RPM	Torque/@ RPM	Model	HP/@RPM	Torque/@ RPM
E3-190 (Mech)	190 @ 2500	475 @ 1300	E7-427	427 @ 1800	1560 @ 1250
E3-220 (Mech)	220 @ 2350	627 @ 1400	E7-454	454 @ 1800	1560 @ 1250
E6-250	250 @ 2100	750 @ 1500	E7-460	460 @ 1800	1660 @ 1200
E6-275	275 @ 2100	1020 @ 1200	E9	550 @ 2100	1660 @ 1300
E6-300	300 @ 1700	1112 @ 1200	E9-450	450 @ 1900	1495 @ 1300
E6-350	350 @ 1800	1277 @ 1250	E9-500	500 @ 1900	1660 @ 1300
E7-250 (Mech)	250 @ 1950	975 @ 1200	EM6-250	250 @ 2100	940 @ 1260
E7-300	300 @ 1800	1160 @ 1200	EM6-250L	250 @ 1750	1190 @ 1020
E7-300 (Mech)	300 @ 1950	1083 @ 1200	EM6-275	275 @ 2100	1038 @ 1260
E7-300 (V-MAC)	300 @ 1700	1160 @ 1200	EM6-275L	275 @ 1750	1305 @ 1020
E7-310/330	310/330 @ 1800	1360 @ 1100	EM6-300L	300 @ 1750	1425 @ 1020
E7-325 VMAC	325 @ 1800	1260 @ 1250	EM7-250 (Mech)	250 @ 1750	1190 @ 1020
E7-330/350	330/350 @ 1800	1460 @ 1100	EM7-250L	250 @ 1750	1190 @ 1020
E7-350	350 @ 1800	1277 @ 1250	EM7-275	275 @ 1750	1305 @ 1020
E7-350	350 @ 1800	1360 @ 1200	EM7-275 (Mech)	275 @ 1750	1305 @ 1250
E7-350 VMAC	350 @ 1800	1250 @ 1250	EM7-275 (V-MAC)	275 @ 1750	1305 @ 1250
E7-355/380	355/380 @ 1800	1560 @ 1100	EM7-300	300 @ 1750	1425 @ 1020
E7-375 VMAC	375 @ 1800	1460 @ 1250	EM7-300 (Mech)	300 @ 1750	1425 @ 1020
E7-400	400 @ 1800	1460 @ 1250	EM7-300VMAC	300 @ 1750	1425 @ 1020
E7-400	400 @ 1800	1460 @ 1200			

Other Torque Chart

Model	HP/@RPM	Torque/@ RPM
GM 6.5L NatAsp	155 @ 3600	275 @ 1700
GM 6.5L NatAsp	160 @ 3400	290 @ 1700
GM 6.5L Turbo	180 @ 3400	360 @ 1700
GM 6.5L Turbo	190 @ 3400	385 @ 1700
Volvo 260E/300AE	260 @ 2100	800 @ 1080
Volvo 280G/330BE	280 @ 1700	925 @ 1200
Volvo 300A/360CE	300 @ 2100	925 @ 1200
Volvo 300CC/410DE	300 @ 2100	955 @ 1200
Volvo 310B	310 @ 1900	985 @ 1200

NOTES

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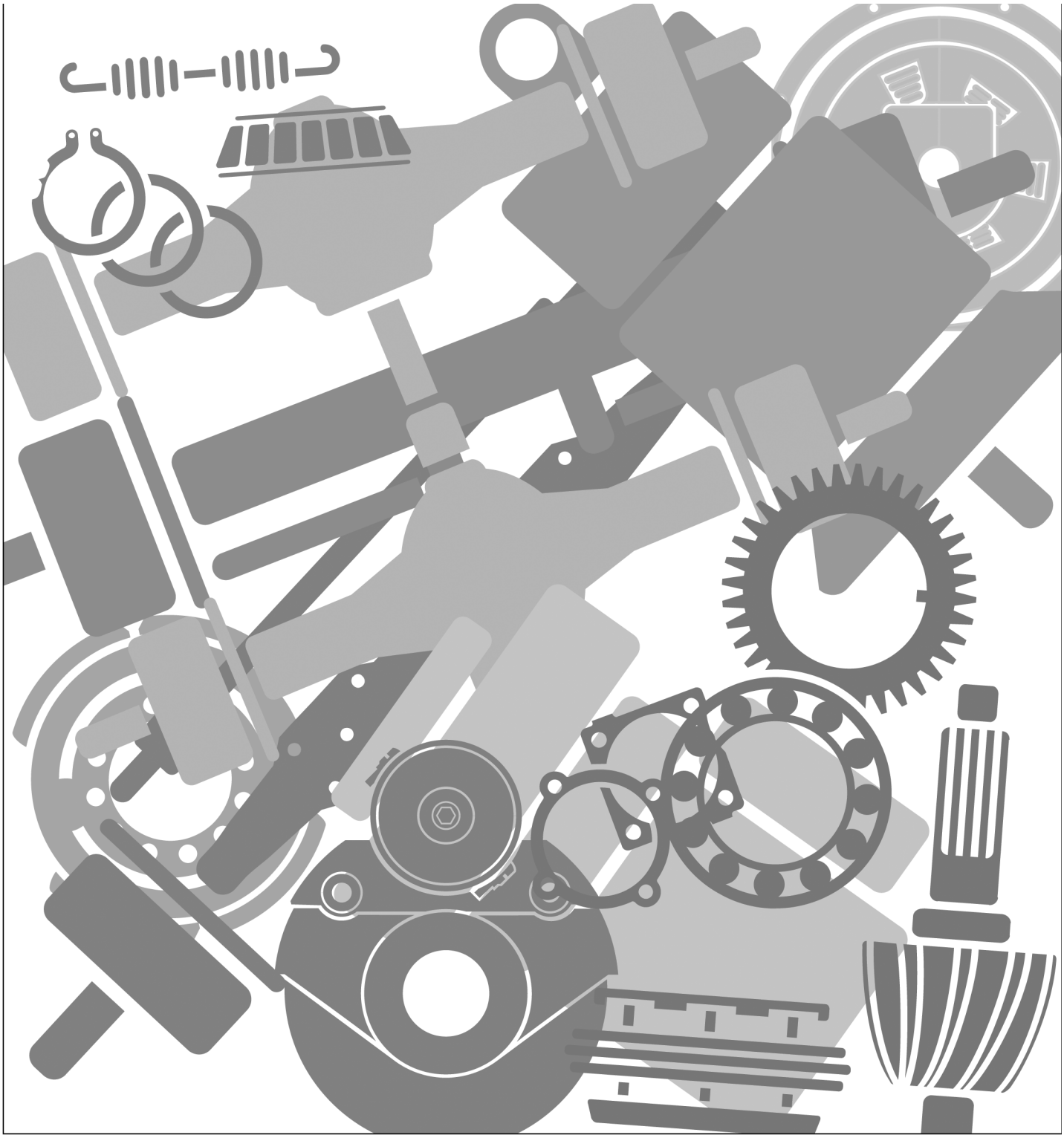

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