ACE

Manufacturing & Parts Co.

American Made Clutches Since 1967

MADE IN THE USA

August, 2011

E-Z RIDER®
HEAVY DUTY CLUTCHES FOR ALL MEDIUM & HEAVY DUTY VEHICLES

By Ace Manufacturing & Parts Co.

INTERTEK ISO 9001:2008

Call Toll Free:
1-800-325-6138

Visit Our Website:
www.ACE-MFG.com

300 Ramsey Street, Sullivan, MO 63080 • Ph. (573)468-4181 • Fax (573)468-5584

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E-Z RIDER® By Ace Manufacturing & Parts Co.

Heavy Duty Clutches, Flywheels & Clutch Accessories

- **No cores to handle—**Because we are the manufacturer, only new parts and assemblies are used. E-Z Rider clutch units are manufactured and assembled in the U.S.A. at our Sullivan, Missouri (St. Louis) facility.

- **The Ace E-Z Rider series clutch** has the easiest pedal action of any new clutch on the market. Ace maintains a number of design and process patents to achieve the soft pedal.

- **Dual adjust feature—**Every Ace clutch incorporates the E-Z adjust feature and the manual adjust capability.

- **Disc springs—**Every Ace E-Z Rider clutch unit is shipped with disc that contain chrome silicon, valve quality steel disc springs that have been cryogenically treated. A patented process that is exclusive to Ace. This process has eliminated spring failures.

- **Friction Material—**Ace offers asbestos-free woven organic, proprietary sintered copper, and iron materials of high friction properties which results in low wear and high reliability. Test results show increased clutch life and less wear to the mating parts with the iron based buttons.

- **Fiber Brake Spacer—**Shipped free of charge in every new Ace clutch unit. The spacer is essential to achieve brake squeeze when the flywheel has been resurfaced.

- **State of the art assembly—**Unlike the competition, every Ace clutch unit is shipped as a “serialzed” matched unit and digitally recorded to the specific serial number.

- **Mack application—**As part of the E-Z Rider series, we offer EZ208935-51 and the EZ208935-51H heavy duty version of the Mack 9 spring clutch unit. New 9 spring units have typically been reserved exclusive to the Mack dealer program.

- **Cast cover replacement—**Ace offers a cast cover replacement for the medium duty stamped steel “throw away” clutch.

- **Training and fieldwork—**Ace will provide training and hold clutch clinics free of charge. Our techs will happily troubleshoot an installation or failure.

- **Warranty—**All Ace clutch units offer 12 months and unlimited mileage warranty against defects in material and workmanship.

Cryogenic Treated Disc Springs

A patented process exlusive to Ace EZ Rider Clutches

One of the many selling features of Ace's E-Z Rider series clutch units is an exclusive patented process of Cryo treating our disc springs. Unlike most clutch manufacturers and rebuilders, we start with a chrome-silicon, valve quality spring. With the combination of higher quality steel and cryo treating, we have virtually eliminated disc spring failure.

Our cryogenic process involves taking springs slowly down to -300f. The temperature cycle is regulated by a computer controlled flow of nitrogen into the chamber where the parts are placed. After the disc springs are returned to room temperature they are placed in a tempering furnace and tempered to a setting of +300f/400f.

A variety of improvements are gained, such as stress relief, wear resistance, and fatigue life. Testing reflects an increase in spring life from 2 to 5 times that of an untreated spring.

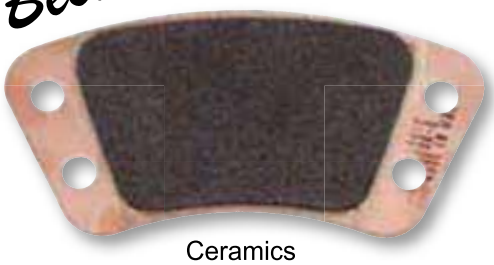
The Theory; The cryogenic process most commonly applies to heat treated steels. Heat treated steels are stronger and harder. Heat treating is a process of heating the steel, quenching in oil or water and draw tempering. Steel is comprised of austenite grain which is soft and weak. The quenching transforms the austenite into harder and stronger martensite. The martensite becomes too brittle in this state for most heat treated steels. By elevating the temperature again .... but to a lower than orignal temperature that it was originally tempered makes the martensite less brittle yet stronger and harder. During this process, the austenite is not completely changed into martensite. The "retained"austenite may still make up more than 5% of the quenched and tempered structure in the steel. By cryogenically treating the steel, the austenite is transformed into martensite so that the structure is 100% martensite. It is believed the cryogenic process causes atoms to diffuse or migrate to these voids and fill them, creating a more homogenious grain structure that aids in improved properties.

We also use this process for all our tools such as dies, punches, drills, taps, broaches and cutting inserts. Depending on the parts being treated, Ace recognizes a 50-300 percent increase in performance life of our tools.

ACE
Manufacturing & Parts Co.
American Made Clutches Since 1967

Friction Material Comparison

Best

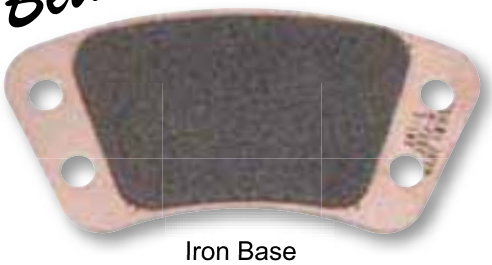


Ceramics

Pros - More aggressive, higher torque, low wear

Cons - Rough on mating surfaces

Better



Iron Base

Pros - Better heat resistance, smoother engagement than ceramic, good wear, easy on mating surfaces

Cons - Lower coefficient than ceramic, lower torque than ceramic

Good

Woven Non Asbestos Organic

Pros - Smooth engagements, light-medium duty, excellent on mating surfaces, not recommended for 300 + HP engines

Cons - Low torque

Determining The Proper Clutch For Your Vehicle

1. Determine the size of the clutch. (14” or 15.5”)

2. If 15.5”, then measure the center flywheel opening. (Dimension *A in the illustration) Approximate flywheels sizes: 7”, 8.5” or 10”

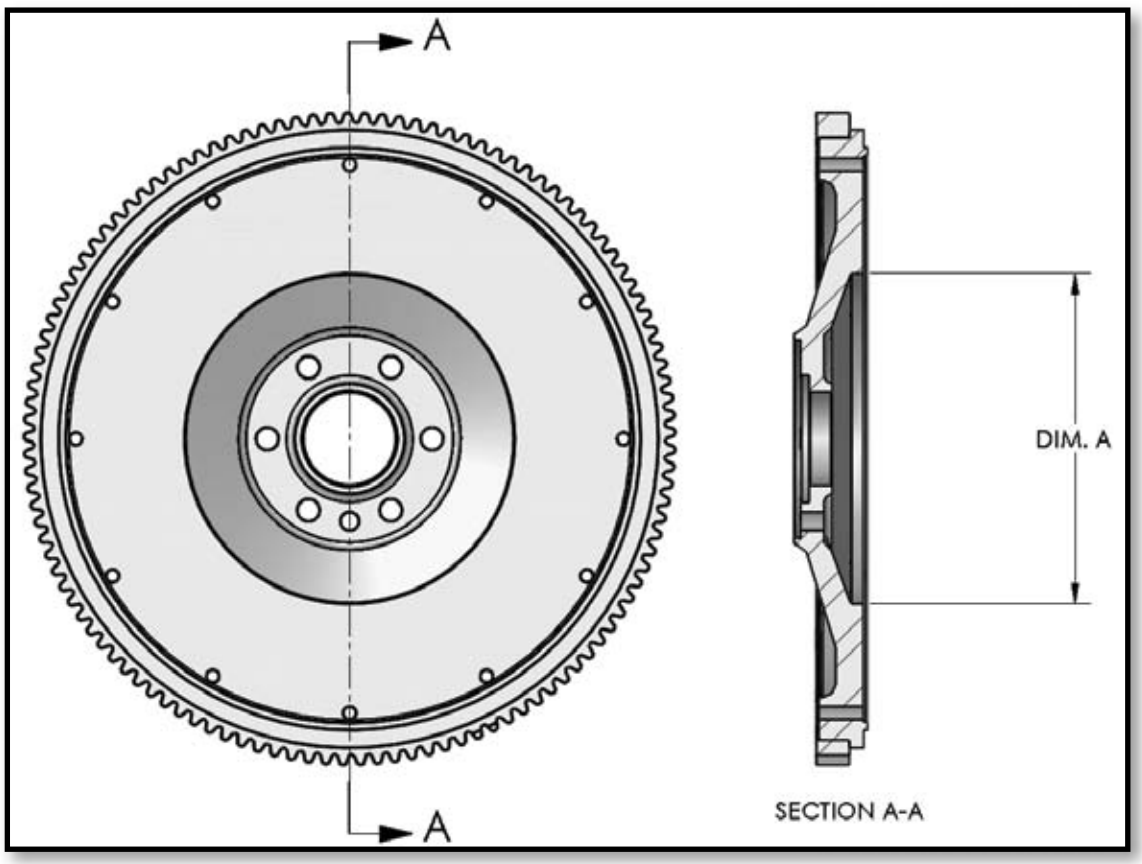
3. Determine engine torque at current settings. (See Page 32-Torque Chart)

A. If flywheel bore is 7”, ONLY use an 8 spring disc.

B. If flywheel bore is 8.5”, use a 10 spring disc.

C. If flywheel bore is 10”, use a 7 spring, 6 spring (VCT), or a 9 spring (Mack Only).

D. If you have a 10” flywheel bore, DO NOT USE ORGANIC FACING. The facing I.D. will extend into the flywheel bore opening, not having full facing contact.



E-Z RIDER®

E-Z Clutch Selection Guide

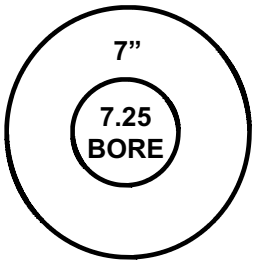
CLUTCH MODELS TO USE BY FLYWHEEL BORE SIZE

14” Clutches

All 14” clutches use 8 spring disc assemblies and can be used only with 7” flywheel bore size.

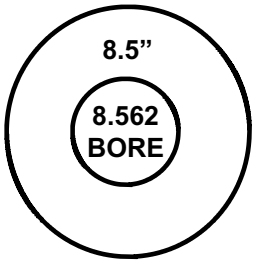
15-1/2” Clutches

Disc types will vary and are designed to be used with a specific flywheel bore size. Shown below are the E-Z RIDER® and STANDARD clutch models designed for each bore size.



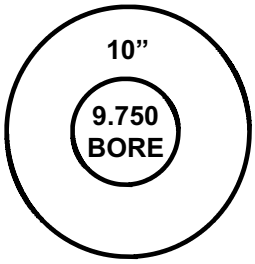
8 Spring Disc

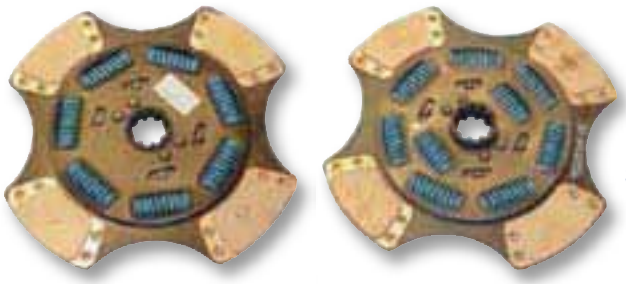
E-Z RIDER® Clutch choices
EZ208391-77B
EZ208391-81B
EZ208391-82B
Standard Clutch choices
107390-77
107390-80
107391-77B
107391-81B
107391-82B



10 Spring Disc

E-Z RIDER® Clutch choices
EZ208391-74B
EZ208391-78B
EZ208391-93B
EZ208391-93H
Standard Clutch choices
107391-74B
107391-78B
107391-93B





7 & 9 Spring Disc

E-Z RIDER® Clutch choices
EZ208925-82B
EZ208925-82H
EZ208935-51 (Mack)
EZ208935-51H (Mack)
Standard Clutch choices
107925-82B
107935-51 (Mack)

*For non-standard requirements and/or selection of the specific model for a vehicle, follow the clutch selection procedure in the catalog.

Heavy Duty Clutch for Medium Duty Truck
14” x 1-3/4” For 14” Flat Flywheel
H.D. Cast Version of Stamped Steel

Dual Disc

TORQUE	PLATE LD	DISC STYLE	PEDAL	ADJ	PART NUMBER	COMMENTS
900	3600	Ceramic 8 Spring 3 Pad Co - Ft	EZ	EZ	EZ107237-8CB	Available With Iron Buttons

TORQUE	PLATE LD	DISC STYLE	PEDAL	ADJ	PART NUMBER	COMMENTS
950	3600	Ceramic 8 Spring 4 Pad Co - Ft	EZ	EZ	EZ107237-4CB	Available With Iron Buttons

Single Disc

TORQUE	PLATE LD	DISC STYLE	PEDAL	ADJ	PART NUMBER	COMMENTS
620	3600	Ceramic 8 Spring 3 Pad Co - Ft	EZ	EZ	EZ107683-5CB	Available With Iron Button

TORQUE	PLATE LD	DISC STYLE	PEDAL	ADJ	PART NUMBER	COMMENTS
680	3600	Ceramic 8 Spring 4 Pad Co - Ft	EZ	EZ	EZ107915-1CB	Available With Iron Button Mercedes
680	3600	Ceramic 8 Spring 4 Pad Co - Ft	EZ	EZ	EZ107683-4CB	Available With Iron Button

Ace Mfg. & Parts Co. manufactures the parts shown above. Spicer® is a registered trademark of Dana Corp.
E-Z Rider® is a registered trademark of Ace Mfg. & Parts Co. Inc., Sullivan, MO USA

Note: These clutches are not adjusted for synchronized transmissions.

Heavy Duty Clutch for Medium Duty Truck
14” x 2” For 14” Flat Flywheel
H.D. Cast Version of Stamped Steel

Dual Disk

TORQUE	PLATE LD	DISC STYLE	PEDAL	ADJ	PART NUMBER	COMMENTS
900	3600	Ceramic 8 Spring 3 Pad Co - Ft	EZ	EZ	EZ107686-2CB	Available With Iron Buttons

TORQUE	PLATE LD	DISC STYLE	PEDAL	ADJ	PART NUMBER	COMMENTS
950	3600	Ceramic 8 Spring 4 Pad Co - Ft	EZ	EZ	EZ107686-4CB	Available With Iron Buttons

The Medium Truck Heavy Duty Cluch

DO YOU WANT
OLD TECHNOLOGY
STAMPED STEEL
LIMITED MILEAGE
“THROW AWAY” CLUTCH?

NO!

-OR-

NEW TECHNOLOGY
EXTENDED MILEAGE
CLUTCH WITH CAST COVER!

YES!

Ace Mfg. & Parts Co. manufactures the parts shown above. Spicer® is a registered trademark of Dana Corp.

Note: These clutches are not adjusted for synchronized transmissions.

14” x 1-3/4” Recess (Pot) Flywheel

TORQUE	PLATE LD	DISC STYLE	PEDAL	ADJ	PART NUMBER	COMMENTS
1150	3600	Organic 8 Springs Co - Ft	EZ	DUAL	EZ108035-82B	
1150	3600	Organic 8 Springs Co - Ft	STD	STD	107035-82B	

TORQUE	PLATE LD	DISC STYLE	PEDAL	ADJ	PART NUMBER	COMMENTS
1400	3600	Ceramic 8 Springs 4 Pad Co - Ft	EZ	DUAL	EZ108063-59A	Available With Iron Button
1400	3600	Ceramic 8 Springs 4 Pad Co - Ft	STD	STD	107063-59A	

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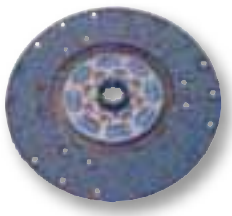
14” x 2” Recess (Pot) Flywheel

TORQUE	PLATE LD	DISC STYLE	PEDAL	ADJ	PART NUMBER	COMMENTS
1250	3600	Ceramic 8 Springs 3 Pad Co - Ft	EZ	DUAL	EZ108034-61B	Available With Iron Button
1250	3600	Ceramic 8 Springs 3 Pad Co - Ft	STD	STD	107034-61B	

TORQUE	PLATE LD	DISC STYLE	PEDAL	ADJ	PART NUMBER	COMMENTS
1150	3600	Organic 8 Springs Co - Ft	EZ	DUAL	EZ108034-82B	
1150	3600	Organic 8 Springs Co - Ft	STD	STD	107034-82B	

TORQUE	PLATE LD	DISC STYLE	PEDAL	ADJ	PART NUMBER	COMMENTS
1400	3600	Ceramic 8 Springs 4 Pad Co - Ft	EZ	DUAL	EZ108050-59B	Heavy Duty Plate Available With Iron Button
1400	3600	Ceramic 8 Springs 4 Pad Co - Ft	STD	STD	107050-59B	Heavy Duty Plate
1400	3600	Ceramic 8 Springs 4 Pad Co - Ft	EZ	DUAL	EZ108050-69B	Standard Plate Available With Iron Button
1400	3600	Ceramic 8 Springs 4 Pad Co - Ft	STD	STD	107050-69B	Standard Plate

15-1/2” x 2” 8 Spring 7” Flywheel Bore



TORQUE	PLATE LD	DISC STYLE	PEDAL	ADJ	PART NUMBER	COMMENTS
1250	3600	Organic 8 Springs Co - Ft	EZ	DUAL	EZ208391-77B	
1250	3600	Organic 8 Springs Co - Ft	STD	STD	107391-77B	
1400	4000	Organic 8 Springs Co - Ft	EZ	DUAL	EZ208391-82B	
1400	4000	Organic 8 Springs Co - Ft	STD	STD	107391-82B	

TORQUE	PLATE LD	DISC STYLE	PEDAL	ADJ	PART NUMBER	COMMENTS
1400	3600	Ceramic 8 Spring 4 Pad Co - Ft	EZ	DUAL	EZ208391-81B	Available With Iron Button
1400	3600	Ceramic 8 Spring 4 Pad Co - Ft	STD	STD	107391-81B	

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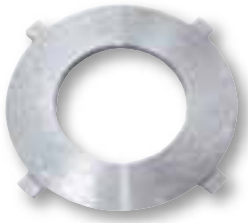
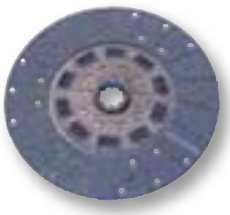
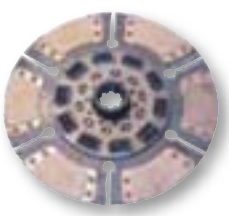
15-1/2” x 2” 10 Spring 8.5” Flywheel Bore





TORQUE	PLATE LD	DISC STYLE	PEDAL	ADJ	PART NUMBER	COMMENTS
1450	4000	Organic 10 Spring Co - Ft	EZ	DUAL	EZ208391-78B	
1450	4000	Organic 10 Spring Co - Ft	STD	STD	107391-78B	

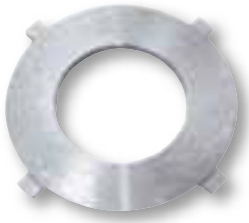
TORQUE	PLATE LD	DISC STYLE	PEDAL	ADJ	PART NUMBER	COMMENTS
1650	3600	Ceramic 10 Spring 4 Pad Co - Ft	EZ	DUAL	EZ208391-74B	Available With Iron Button
1650	3600	Ceramic 10 Spring 4 Pad Co - Ft	STD	STD	107391-74B	
1860	4000	Ceramic 10 Spring 4 Pad Co - F	EZ	DUAL	EZ208391-93B	Available With Iron Button
1860	4000	Ceramic 10 Spring 4 Pad Co - Ft	STD	STD	107391-93B	



TORQUE	PLATE LD	DISC STYLE	PEDAL	ADJ	PART NUMBER	COMMENTS
2050	4000	Ceramic 10 Spring 6 Pad Co - Ft	EZ	DUAL	EZ208391-93H	Available With Iron Button

Ace Mfg. & Parts Co. manufactures the parts shown above. Spicer® is a registered trademark of Dana Corp.

15-1/2” x 2” 7 Spring 10” Flywheel Bore



TORQUE	PLATE LD	DISC STYLE	PEDAL	ADJ	PART NUMBER	COMMENTS
1700	3600	Ceramic 7 Spring 4 Pad Co - Ft	EZ	DUAL	EZ208925-82B	Available With Iron Button
1700	3600	Ceramic 7 Spring 4 Pad Co - Ft	STD	STD	107925-82B	

TORQUE	PLATE LD	DISC STYLE	PEDAL	ADJ	PART NUMBER	COMMENTS
2050	4000	Ceramic 7 Spring 6 Pad Co - Ft	EZ	DUAL	EZ208925-82H	Available With Iron Button

15-1/2” x 2” 9 Spring 10” Flywheel Bore

TORQUE	PLATE LD	DISC STYLE	PEDAL	ADJ	PART NUMBER	COMMENTS
1700	3600	Ceramic 9 Spring 4 Pad Co - Ft	EZ	DUAL	EZ208935-51	Mack Only Available With Iron Button
1700	3600	Ceramic 9 Spring 4 Pad Co - Ft	STD	STD	107935-51	Mack Only

TORQUE	PLATE LD	DISC STYLE	PEDAL	ADJ	PART NUMBER	COMMENTS
2050	4000	Ceramic 9 Spring 6 Pad Co - Ft	EZ	DUAL	EZ208935-51H	Mack Only Available With Iron Button

Ace Mfg. & Parts Co. manufactures the parts shown above. Spicer® is a registered trademark of Dana Corp.

Flywheels

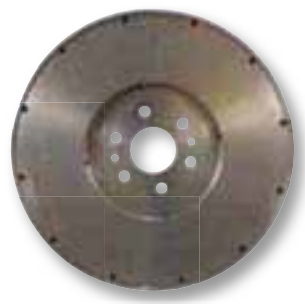
ACE CATALOG # AF4P4797	DESCRIPTION	APPLICATION
	15” FLAT FLYWHEEL 10” BORE 12 MOUNTING BOLT HOLES *USE 7 SPRING CLUTCH BEARING # AB197 (6306) 20” RING GEAR 113 TEETH RING GEAR # AF4N2514	CAT 3406/3406E

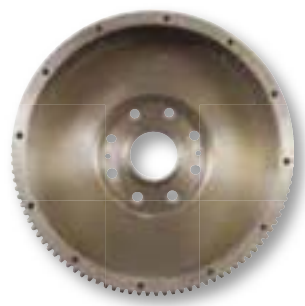
ACE CATALOG # AF9Y9311	DESCRIPTION	APPLICATION
	14” FLAT FLYWHEEL 7” BORE 10 MOUNTING BOLT HOLES *USE WITH 8 SPRING CLUTCH BEARING # AB199 (6305) OR AB190 (6206)RING GEAR # AF9L8113 RING GEAR #968113 17” RING GEAR 134 TEETH	CAT 3208

ACE CATALOG # AF1265875	DESCRIPTION	APPLICATION
	14” FLAT FLYWHEEL 7” BORE 8 MOUNTING BOLT HOLES 1 DOWEL PINHOLE BEARING # AB190 (6206-2RS) 17” RING GEAR 134 TEETH RING GEAR # 7W5095	CAT 3116/3126

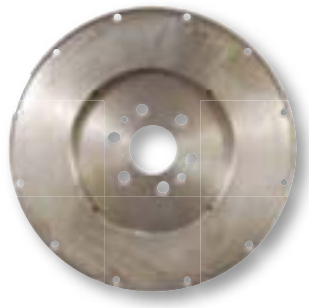
Flywheels

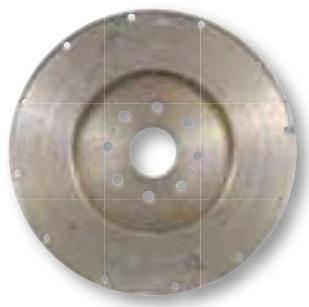
ACE CATALOG # AF3016495	DESCRIPTION	APPLICATION
	14” POT FLYWHEEL 7” BORE 6 MOUNTING BOLT HOLES *USE 8 SPRING CLUTCH BEARING # AB197 (6306) DRIVE PINS NOT INCLUDED 17” RING GEAR 103 TEETH RING GEAR # AF4797	CUMMINS NT855 SMALL CAM BIG CAM

ACE CATALOG # AF3021660	DESCRIPTION	APPLICATION
	15” FLAT FLYWHEEL 8.5” BORE 6 MOUNTING BOLT HOLES *USE 10 SPRING CLUTCH BEARING # AB197 (6306) 17” RING GEAR 103 TEETH RING GEAR # 4797	CUMMINS NT855/N14

ACE CATALOG # AF3042787	DESCRIPTION	APPLICATION
	14” POT FLYWHEEL 7” BORE 8 MOUNTING BOLT HOLES *USE 8 SPRING CLUTCH BEARING # AB197 (6306) DRIVE PINS NOT INCLUDED 17” RING GEAR 103 TEETH RING GEAR # AF4797	CUMMINS L10/M11

Flywheels

ACE CATALOG # AF3071535	DESCRIPTION	APPLICATION
	15” FLAT FLYWHEEL 10” BORE 6 MOUNTING BOLT HOLES *USE 7 SPRING CLUTCH BEARING # AB197 (6306) 17” RING GEAR 103 TEETH RING GEAR # AF4797	CUMMINS NT855 N14

ACE CATALOG # AF3071615	DESCRIPTION	APPLICATION
	15” FLAT FLYWHEEL 10” BORE 8 MOUNTING BOLT HOLES *USE 7 SPRING CLUTCH BEARING # AB197 (6306) RING GEAR # AF4797 17” RING GEAR 103 TEETH	CUMMINS M11

ACE CATALOG # AF3921263	DESCRIPTION	APPLICATION
	14” FLYWHEEL 7” BORE 8 MOUNTING BOLT HOLES *USE 8 SPRING CLUTCH BEARING # AB190 (6206) RING GEAR # AF3903309 173 TEETH	CUMMINS 5.9-B

Flywheels

ACE CATALOG # AF23509709	DESCRIPTION	APPLICATION
	15” FLAT FLYWHEEL 10” BORE 12 MOUNTING BOLT HOLES *USE 7 SPRING CLUTCH BEARING # AB197 (6306) 20” RING GEAR 118 TEETH RING GEAR # AF5166664	DETROIT SERIES 60

ACE CATALOG # AF8922126	DESCRIPTION	APPLICATION
	14” FLYWHEEL 7” BORE 8 MOUNTING BOLT HOLES *USE 8 SPRING CLUTCH BEARING # AB195 (6205) 17” RING GEAR 138 TEETH RING GEAR # AF5116302	DETROIT 8.2

Ford-Sterling

ACE CATALOG # AFE7HZ6375A	DESCRIPTION	APPLICATION
	14” FLAT FLYWHEEL 7” BORE 8 MOUNTING BOLT HOLES *USE 8 SPRING CLUTCH BEARING # AB190 (6206) 17” RING GEAR 138 TEETH RING GEAR # AFE6HZ6384A	FORD 6.6 & 7.8

Flywheels

ACE CATALOG # AF530GB3142	DESCRIPTION	APPLICATION
	15” FLAT FLYWHEEL 10” BORE 20” RING GEAR 118 TEETH *USE 9 SPRING CLUTCH BEARING # AB197S (6306-2RSNR) RING GEAR # AF673GB222	MACK 675 & 676

ACE CATALOG # AF530GB3145B	DESCRIPTION	APPLICATION
	15” FLAT FLYWHEEL 10” BORE DOWEL HOLE TIMING MARK 6 METRIC BOLT HOLES *USE 9 SPRING CLUTCH BEARING # AB197S (6306-2RSNR) 20” RING GEAR 118 TEETH RING GEAR # AF673GB222	MACK E7

ACE CATALOG # AF530GB3170	DESCRIPTION	APPLICATION
	15” FLAT FLYWHEEL 10” BORE DOWEL HOLE TIMING MARK 6 METRIC BOLT HOLES *USE 9 SPRING CLUTCH BEARING # AB197S (6306-2RSNR) 20” RING GEAR 117 TEETH RING GEAR # 673GB35	MACK E7 E-TECH SERIES

Flywheels

ACE CATALOG # AF1809144C91	DESCRIPTION	APPLICATION
	14” FLAT FYWHEEL 7” BORE 9 MOUNTING BOLT HOLES *USE 8 SPRING CLUTCH BEARING # AB195 (6205) 17” RING GEAR 137 TEETH RING GEAR # 1800777C1	NAVISTAR 7.3 INTERNATIONAL 6.9 INTERNATIONAL

ACE CATALOG # AF1810855C93	DESCRIPTION	APPLICATION
	14” FLAT FYWHEEL 7” BORE 8 MOUNTING BOLT HOLES *USE 8 SPRING CLUTCH BEARING # AB195 (6205) 17” RING GEAR 138 TEETH RING GEAR # AF1815440C1	NAVISTAR DT466

ACE CATALOG # AF1818214C91	DESCRIPTION	APPLICATION
	14” FLAT FLYWHEEL 7” BORE 10 MOUNTING BOLT HOLES *USE 8 SPRING CLUTCH BEARING # AB190 (6206) OR AB199 (6305) 17” RING GEAR 138 TEETH RING GEAR # AF1800777C1	NAVISTAR 7.3 INTERNATIONAL

ACE CATALOG # AF1821915C91	DESCRIPTION	APPLICATION
	14” FLAT FLYWHEEL 7” BORE 12 MOUNTING BOLT HOLES *USE 8 SPRING CLUTCH BEARING # AB190 (6206) OR AB199 (6305) 17” RING GEAR 138 TEETH RING GEAR # AF1815440C1	NAVISTAR DT466E

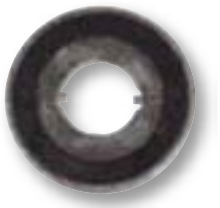
Clutch Accessories

Part Number	Reference	Description
A119BP	274C-6	Drive Pin 14" Flywheel (6 per card)
A148BP		2" Brake Spacer (6 per card)
A153BP		1.75" Brake Spacer (6 per card)
B175		1.75" 2 pc Hinge Clutch Brake
B201		2" 2pc Hinge Clutch Brake
B201-500		2" Oversized 2 pc Hinge Clutch Brake
A230EZ		E-Z Adjuster
A236BP		Spring Loaded Adjuster
A237BP		2" 1pc Clutch Brake
A238BP		1.75" 1pc Clutch Brake
A239BP	127740	1.75" Torque Limiting Brake
A240BP	127760	2" Torque Limiting Brake
A537BP	127200	2" 2pc Clutch Brake
A538BP	127175	1.75" 2pc Clutch Brake
AB195BP	6205-2RS	Pilot Bearing (rubber sealed)
AB195SBP	6205-2RSNR	Pilot Bearing (rubber sealed for Mack)
AB197BP	6306-2RS	Pilot Bearing (rubber sealed for Mack)
AB197SBP	6306-2RSNR	Pilot Bearing (rubber sealed for Mack)
AB197VBP	6306-2VS	Pilot Bearing (Viton Sealed)
AB197SVBP	6306-SN	Pilot Bearing (Viton Sealed for Mack)
CS106C-939BP	106C-939	Long Shaft
CS106C-1047BP	106C-1047	Long Shaft
CS106C-1094BP	106C-1094	Long Shaft
CS106C-1529BP	106C-1529	Long Shaft
CSB12815BP	12815	Shaft Bushing (4 per card)
CSF105C-137BP	105C-137	Release Fork
IPS1659		Input Shaft
Alignment		
AT-HT150		1.50 X 10 SPLINE 1.180 pilot
AT-HT175		1.75 X 10 SPLINE 1.180 pilot
AT-HT175A		1.75 X 10 SPLINE .980 pilot
AT-HT175X1		1.75 X 10 SPLINE 1.0 pilot
AT-HT200		2.00 X 10 SPLINE 1.180 pilot
Instalation Kits		
AK2468	RT Series	Major Install Kit
AK2175	1.75"	Minor Install Kit w/Torque Brake
AK2200	2"	Minor Install Kit w/Torque Brake
AK2201	2"	Minor Install Kit w/2 pc. Hinge Clutch Brake

A119BP
DRIVE PIN

A236BP
SPRING ADJUSTER

A230EZ
SPRING ADJUSTER



A237BP-A238BP
1 PC. CLUTCH BRAKE

A239BP-A240BP
TORQUE LIMITING
CLUTCH BRAKE

B201BP
QUICK CHANGE
HINGE BRAKE

AB195BP - AB197BP
AB197VBP
PILOT BEARING

AB195SBP - AB197SBP
AB197SVBP
PILOT BEARING

AT-HT150 - AT-HT175
AT-HT175A
AT-HT175X1
AT-HT200
ALIGNMENT TOOL

CSF105C137BP
RELEASE YOKE

CS106C1094BP
LONG SHAFT-
BELL HOUSING

CSB12815BP
BUSHING-
BELL HOUSING

IPS1659
INPUT SHAFT 2"
10 SPLINE W/BUSHING

A148BP
FIBER DISC

ACE MANUFACTURING & PARTS CO., INC. 300 Ramsey - Sullivan, MO 63080
Phone: (573) 468-4181 • Fax: (573) 468-5584

Our "BASIC" Clutch Installation Kit

Part #AK2200 Includes:
(1) CSF105C137 Fork
(1) A240 2" Brake
(4) CSB12815 Bushings

Part #AK2175 Includes:
(1) CSF105C137 Fork
(1) A239 1.75" Brake
(4) CSB12815 Bushings

Our "BASIC" Clutch Installation Kit

Part # AK2201 Includes:
(1) CSF105C137 Fork
(1) B201 2" 2 Piece
Clutch Brake
(4) CSB12815 Bushings

CALL TOLL FREE
1-800-325-6138

ACE MANUFACTURING & PARTS CO., INC. 300 Ramsey - Sullivan, MO 63080
Phone: (573) 468-4181 • Fax: (573) 468-5584

Complete Clutch Installation Kit
Part # AK2468

This clutch installation kit includes the following:

- Clutch Housing Gasket
- Front Bearing Cover Gasket
- Inner Retaining Ring
- Outer Retaining Ring
- Front Bearing Cover
- 2” Torque Brake
- Shift Lever Housing Gasket
- Bearing w/Snap Ring
- Pilot Bearing
- Cross Shaft Bushings
- Standard Release Yoke
- 2” - 10 Spline Input Shaft

CALL TOLL FREE
1-800-325-6138

ACE MANUFACTURING & PARTS CO., INC. 300 Ramsey - Sullivan, MO 63080
Phone: (573) 468-4181 • Fax: (573) 468-5584

Clutch Installation Tool Kit
Part # ATK-200

Kit Contains:

Clutch Adjustment Gauge, Disc Alignment Shaft, Clutch Alignment Pins, Shaft Removal Tool, and Flywheel Gauge

CALL TOLL FREE
1-800-325-6138

ACE MANUFACTURING & PARTS CO., INC. 300 Ramsey - Sullivan, MO 63080
Phone: (573) 468-4181 • Fax: (573) 468-5584

CLUTCH INSTALLATION GUIDELINES

Tech Tip

You must have a minimum of 5/16” distance from the friction surface (face) of your flywheel to the top of the bolthead that holds the flywheel to the crankshaft. If it is less than 5/16”, you need a NEW flywheel!

E-Z RIDER®

Heavy Duty Clutches

ACE MANUFACTURING & PARTS CO., INC. 300 Ramsey - Sullivan, MO 63080
Phone: (573) 468-4181 • Fax: (573) 468-5584

CLUTCH INSTALLATION GUIDELINES

Does your new clutch need a clutch brake spacer?

Our E-Z RIDER® clutches are pre-adjusted at the factory. Therefore, no adjustment should be required at the time of installation. However, if the flywheel has been reground and/or the transmission flange is worn, you may need to use a fiber spacer in conjunction with the new clutch brake you are installing with the clutch.

On vehicles with this type of wear, the common complaint at time of installation is “can’t get the clutch brake to squeeze”. The solution could be to use the 1/8” fiber brake washer. Or, you may need to replace the flywheel.

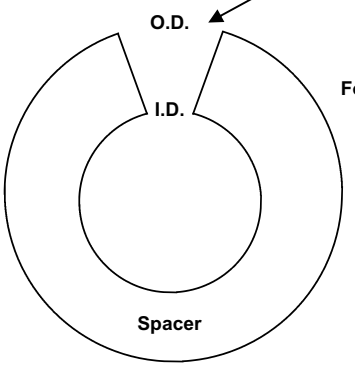
Before deciding that, however, we suggest you install the spacer to see if that solves the problem. One is included with this clutch for that purpose. If you do not need it, discard or save for future installations.

To use the spacer, slide the fiber washer onto the input shaft next to the transmission before the clutch brake itself is put on. Then install the clutch and set the linkage per your usual procedure. ***(see schematic 1)***

If the clutch and the transmission are already installed without the spacer and you are having release problems, it may be possible to install the spacer without removing the clutch and clutch brake. Cut a “V” shape on the fiber so it can be twisted and slipped onto the input shaft from the side. Be sure to cut the bottom of the “V” smaller than the O.D. of the input shaft so it won’t fall off during operation. ***(see schematic 2)***

You should now be able to twist the fiber and fit it over the input shaft between the clutch brake and the transmission flange. You can now proceed to reset the clearance between the bearing lid and clutch brake at 1/2” to 9/16” with the internal clutch adjuster.

Schematic 1



Schematic 2

1-3/4” Fiber Part No. A153

2” Fiber Part No. A148

E-Z Rider® is a registered trademark of Ace Mfg. & Parts Co. Inc., Sullivan, MO USA

CLUTH INSTALLATION

GENERAL CLUTCH INSTALLATION GUIDELINES

FOR E-Z RIDER® 14” & 15.5” TWO-PLATE CLUTCHES

1. (14” & 15.5”) Check condition of flywheel. If it is cracked or warped, resurface or replace flywheel. Surface must be smooth or premature clutch failure can occur. Flywheel depth must be 2.937”, for 14” two-plate clutches. The 15.5” clutch uses a flat flywheel. REMEMBER: Machining the flywheel past the .060” recommended, moves the pressure plate away from the transmission. In this event, install a fiber spacer (provided) on the pilot shaft between the clutch brake and the transmission. The release yoke in the bell housing may not align properly with the pressure plate release bearing housing. Linkage adjustment may be required.
2. (14” & 15.5”) Inspect and dial-indicate the mating surface of engine flywheel housing and clutch bell housing for alignment and also check flywheel run out. CAUTION: If misalignment is greater than limits recommended, this will cause poor clutch release, rapid wear on transmission pilot shaft and destruction of the clutch disc. Excessive flywheel run out may cause severe vibration in vehicle drive line.
3. (14” & 15.5”) A new pilot bearing should be used. Before installing pilot bearing into flywheel, check freedom of movement on transmission pilot shaft.
4. (14” Only) Drive pins in the flywheel should be replaced. Check and be sure drive pin heads are square with the flywheel friction surface. (If drive pins are not replaced, assume that they have turned. The constant pounding of the center plate may have changed the position of the drive pins in the flywheel. Play it safe - Check them all!)
5. (14” Only) After the drive pins are installed and properly aligned, position the center plate onto the drive pins and check the clearance with a feeler gauge. Clearance should be .006” to .010” and be measured from the same side of the drive pin at each location. The center plate should move up and down freely on the pins.
6. (14” Only) Install front clutch disc, center plate and rear disc as marked.
7. (14” Only) Insert alignment shaft through both clutch discs making sure it enters the pilot bearing. (NOTE: If an old pilot shaft with worn splines is used to align clutch disc, transmission pilot shaft may damage clutch hubs during installation of transmission.)
8. (14” Only) Position cover assembly onto the pilot shaft and guide towards flywheel mounting surface, making sure the cover fits into the flywheel pilot. Start cap screws.

GENERAL CLUTCH INSTALLATION GUIDELINES (Cont.)

FOR E-Z RIDER® 14" & 15.5" TWO-PLATE CLUTCHES

9. (15.5" Only) Insert alignment shaft through bearing housing. Install rear disc, center plate and front disc on alignment shaft. Move clutch housing towards flywheel making sure cover fits into flywheel pilot.

10. (14" & 15.5" Only) Install the cap screws that fasten the clutch housing on the flywheel. Tighten the cap screws to the specified torque and the sequence specified by the manufacturer of the vehicle or transmission. Cap screws should be Class 5 or greater.

11. (14" & 15.5") Examine transmission pilot shaft for wear and replace if necessary. (Worn splines on pilot shaft will cause clutch to release improperly and may cause splined hubs in clutch disc to break out.)

12. (14" & 15.5") Inspect release bearing yoke and both cross shaft bushings in bell housing and replace if worn. (NOTE: For proper clutch release, release bearing housing on cover must "squeeze" clutch brake during clutch disengagement. Worn parts in bell housing may prevent full movement of release bearing during operation of vehicle.)

13. (14" & 15.5") If clutch brake is to be used, place on transmission pilot shaft.

14. (14" & 15.5") Rotate release bearing housing on cover assembly until flat section is on top. (NOTE: Bell housing cross shaft on some vehicles may be below center. This requires the flat section on release bearing to be in down position.) Note position on clutch when being removed.

15. (14" & 15.5") Using extreme caution, guide transmission through cover and disc assembly, rotating bell housing shaft so that release yoke fingers are clear of the pads on the release bearing assembly. (WARNING: Transmission must not hang or be forced into the clutch. This can warp the clutch disc and prevent the clutch from releasing.)

16. (14" & 15.5") Start bell housing cap screws and tighten progressively to the torque recommended by the vehicle manufacturer.

17. (14" & 15.5") Release bearing has been pre-packed with grease from the factory.

18. (14" & 15.5") Install clutch linkage. See "Clutch Adjustment Procedure".

E-Z RIDER®

CLUTCH ADJUSTMENT PROCEDURE

NOTE: E-Z RIDER® clutches are adjusted at the factory to original equipment specifications, and should require very little internal adjustment to achieve proper release and engagement. The clutch must not be adjusted to accommodate thin or worn flywheels, or worn linkage, yoke and/or cross shaft bushings, or to accommodate other drive train deficiencies. Adjustment for such purposes will either cause the clutch to not function properly or will cause early clutch failure, and will be apparent on factory inspection of warranty claims... and therefore will void the manufacturer warranty.

THIS PROCEDURE COVERS BOTH 14" AND 15 1/2" CLUTCHES

STEP #1

After clutch installation, check the clearance between the yoke tips and wear pads on bearing housing for 1/8" clearance. This determines pedal freeplay. ***(See Illustration)***

Adjust the clutch **linkage** to increase or decrease the yoke-to-bearing clearance. **NEVER USE THE INTERNAL CLUTCH ADJUSTMENT FOR THIS PURPOSE.**

STEP #2

Check for proper clutch brake and bearing gap of 1/2" to 9/16". If the gap is not within these tolerances, the clutch needs adjusting.

If the clutch does need adjusting, remove the lock strap and set the clearance between the bearing and clutch brake at 1/2" to 9/16". **THIS DIMENSION IS CRITICAL. DO NOT VARY - EITHER OVER OR UNDER THESE DIMENSIONS - UNDER ANY CIRCUMSTANCES.**

Use the internal adjustment on the clutch to move the bearing. Turn adjuster clockwise to move bearing towards transmission (to decrease clearance) or counter clockwise to move the bearing towards the engine (to increase clearance). If internal adjustment exceeds 4 notches either way the clutch may not release or may slip.

Put tension on the linkage to be sure bearing is stretched and no movement towards the engine is noticed. Measure clutch brake and bearing gap with 1/2" - 9/16" gauge. ***(See Illustration)*** Once the adjustment is set, re-install lock strap.

REMINDER: The bearing must move a minimum of 1/2" or clutch will not release. Eliminate lost motion before checking for 1/2" movement. Lost motion is generally caused by loose or worn linkage, or worn yoke or cross shaft bushings.

STEP #3

If internal clutch adjustment was made re-verify the 1/8" clearance between the yoke tips and wear pads on bearing housing shown in Step #1 above. If necessary, re-align linkage to obtain proper clearance. ***(See Illustration)***

STEP #4

Re-verify the clutch brake squeeze by inserting .010 feeler gauge between bearing and clutch brake, then depressing the pedal to end of stroke. The feeler gauge must be tightly clamped between the bearing and the clutch brake. ***(See Illustration)*** This verifies the contact of the bearing to the clutch brake.

The clutch brake will be squeezed if the total pedal stroke slightly exceeds the movement required to move the yoke/fork 5/8" to 11/16" (the combined total of the 1/8" clearance between yoke tips and wear pads and the 1/2" - 9/16" brake squeeze gap.

IN THE EVENT THE BRAKE IS NOT BEING SQUEEZED, DO NOT CHANGE THE 1/2" - 9/16" GAP FOR THE CLUTCH BRAKE, OR THE 1/8" CLEARANCE FOR THE BEARING HOUSING, CONSULT THE VEHICLE MANUFACTERER SERVICE MANUAL.

In analyzing the reasons for the brake not being squeezed, other things to check for are:

A. Worn linkage components or yoke and cross shaft bushings. If necessary, replace those components.
B. Improper linkage assembly. Verify that linkage is assembled in the correct hole locations.
C. Pedal stroke. To adjust, raise the upper and/or lower the lower pedal stops.

NOTE: MAXIMUM BRAKE SQUEEZE (IN CAB OF TRUCK) SHOULD NOT EXCEED 1" FROM THE END OF PEDAL STROKE. IF IT DOES, IT CAN BE ADJUSTED BY:

A. Changing pedal stops in cab to reduce total pedal stroke.
B. Increasing 1/8" yoke-to-bearing setting to lower squeeze. (This will increase free-pedal travel)

(continued)

E-Z RIDER®

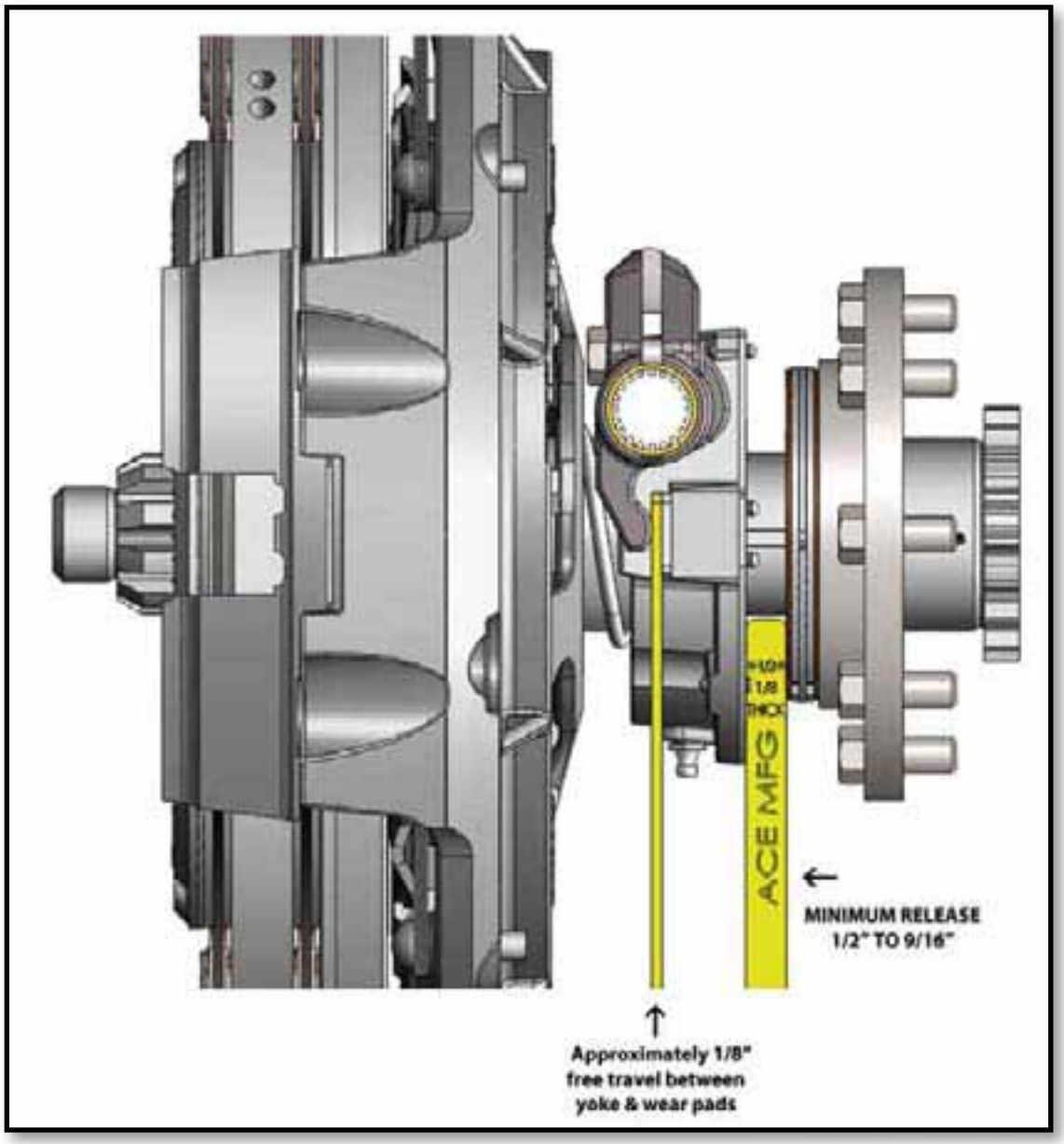
CLUTCH ADJUSTMENT PROCEDURE (Cont.)

STEP #5

Once the external parts are in tune with the clutch, record the measured amount of free-pedal movement in the vehicle log. This is the normal (standard) pedal travel for this vehicle. Then, if and when the clutch again needs adjustment, it should be adjusted back to this standard.

Example: If pedal travel standard is 2”, the clutch may need adjustment when wear has reduced it to about 1” of travel.

INSTALLER SHOULD CAREFULLY CHECK TO VERIFY THAT THERE IS 1/8” OF FREE TRAVEL BETWEEN THE YOKE AND THE WEAR PADS AND A MINIMUM OF 1/2” TO 9/16” OF SPACE BETWEEN THE BEARING AND THE CLUTCH BRAKE.



Maintenance Tips

IT IS IMPORTANT TO NOTE THAT THESE ARE GENERAL GUIDELINES ONLY AND THAT THE INSTALLER SHOULD ALWAYS REFER TO THE VEHICLE MAINTENANCE MANUAL FOR SPECIFIC DETAILS.

1. Only high temperature grease should be used for clutch bearing housing and linkage lubrication. Do not use chassis lubricant for clutch lubrication. Refer to the vehicle maintenance manual for lubricant specifications.
2. Lubricate the clutch release bearing each time the chassis is lubricated.
3. When lubricating the clutch, apply lubricant to each fitting on the clutch housing.
4. Every point in the clutch linkage must be lubricated in addition to the clutch housing.
5. Exercise caution in lubricating the bearing, as any excess lubricant will find its way onto the clutch facing.
6. Adjust the clutch before the pedal clearance has disappeared. Failure to do so will result in slippage and adjustment afterwards may not be effective.
7. If the clutch is hydraulically assisted, make sure the slave and master cylinders are functioning properly.

ENGINE HORSEPOWER & TORQUE RATINGS

The data listed herein has been compiled from vehicle manufacturers and other reliable sources of information and is correct to the best of our knowledge. However, Ace Manufacturing & Parts Co. Cannot assume any responsibility for the accuracy of or possible errors in this information or in any other current or future informative bulletins of this nature.

IN SEQUENCE BY HORSEPOWER

NOTE: RATE VARIABLE HORSEPOWER ENGINES TO HIGHEST HORSEPOWER/TORQUE

ENGINE	HP	@ RPM	TORQUE	@ RPM
CUM 4BT3.9	105	2500	260	1700
CUM 4BTA3.9	120	2500	304	1700
GM 6.5L NATASP	155	3600	275	1700
CUM 6BT55.9	160	2500	400	1700
GM 6.5 L NATASP	160	3400	290	1700
FD-1060	160	2500	400	1600
INTL T444E	160	2600	400	1500
FORD 7.3 HI. ALT.	165	3000	325	1600
CAT 3116 (HEUI)	170	2200	420	1560
CAT 3116 (MD)	170	2600	420	1560
CAT 3126	175	2400	420	1440
FD-1060	175	2500	420	1600
INTL DT-408	175	2600	430	1800
INTL T444E	175	2600	430	1500
GM 6.5L TURBO	180	3400	360	1700
CAT 3116	185	2600	520	1560
CAT 3116G	185	2600	495	1560
CAT 3116	185	2200	520	1560
FORD 7.3L NATASP	185	3000	360	1400
CAT 3126	190	2200	520	1440
CUM 6BTA5.9	190	2500	475	1600
FD-1060	190	2500	475	1600
FORD 7.3L TURBO	190	3000	395	1400
GM 6.5 L TURBO	190	3400	385	1700
INTL DT-408	190	2600	485	1800
INTL T444E	190	2600	485	1500
MACK E3-190 (MECH) CAT	190	2500	475	1300
3116	195	2200	521	1560
INTL DT 466	195	2400	520	1600
CAT 3116 (MD)	200	2600	520	1560
CAT 3208T(MD)	200	2000	620	1400
	200	2600	495	1560
	200	2600	520	1560
CAT 3126	210	2200	605	1440
CAT 3126	210	2400	520	1440
CUM 6BTA5.9	210	2500	520	1600
CUM 6CT8.3	210	2200	605	1500
FD-1060	210	2500	485	1600
FD-1060	210	2300	520	1600
FD-1460	210	2200	605	1300
INTL DT 408	210	2600	520	1800
INTL DT 466	210	2400	605	1600

IN SEQUENCE BY HORSEPOWER
NOTE: RATE VARIABLE HORSEPOWER ENGINES TO HIGHEST HORSEPOWER/TORQUE

ENGINE	HP	@ RPM	TORQUE	@ RPM
CAT 3116	215	2200	605	1560
CAT 3116 (GM '91 UP)	215	2600	605	1560
	215	2600	550	1560
CUM NHTC-220	220	2100	644	1500
MACK E3-220 (MECH)	220	2350	627	1400
FD-1460	225	2200	660	1300
DD 6-71	230	2100	611	1600
CAT 3116	230	2200	660	1560
CAT 3126	230	2200	660	1440
CAT 3176ATTMC	230	1800	975	1100
CUM 6BTA5.9	230	2500	605	1600
FD-1060	230	2300	605	1600
INTL DT 408	230	2600	605	1800
INTL DT-466	230	2400	660	1600
CAT 63306 CNG/LNG	235	2100	800	1200
CUM-FORM-L10-240	240	1400	858	1300
CUM L10-240	240	1900	870	1300
CUM FORM.240	240	1800	870	1300
CUM PT 240	240	2100	900	1300
CUM 6CTA8.3	240	2200	645	1500
L-10 FORM 240	240	1900	860	1300
L-10 240/250PT	240-2100	250-2200	900	1300
CAT 3306	245	2200	820	1300
CAT 3306	245	2100	860	1350
CAT 63306 LPG (HD5)	250	2100	820	1200
CAT 3116	250	2200	660	1560
CAT 3126	250	2200	660	1440
CAT 3126	250	2200	800	1440
CAT 3208T (MD)	250	2600	640	1400
6CTA-250	250	2200	720	1300
CUM 6CTA8.3	250	2200	728	1500
FD-1460	250	2200	660	1300
FD-1460	250	2000	800	1300
MACK E6-250	250	2100	750	1500
CAT 3306	250	1800	860	1350
MACK EM6-250	250	2100	940	1260
DD HAL	250	1800	970	1200
CAT 3176 ATMC	250	2100	975	1300
CAT 3406	250	1600	1000	1200
INTL 530	250	2200	800	1300
INTL DT-466	250	2400	660	1600

IN SEQUENCE BY HORSEPOWER
NOTE: RATE VARIABLE HORSEPOWER ENGINES TO HIGHEST HORSEPOWER/TORQUE

ENGINE	HP	@ RPM	TORQUE	@ RPM
MACK EM6-250L	250	1750	1190	1020
MACK E7-250 (MECH)	250	1950	975	1200
MACK EM7-250 (MECH)	250	1750	1190	1020
MACK EM7-250L	250	1750	1190	1020
CAT 3116 (GM-MD)	250	2600	650	1560
SERIES 50 8.5L-IL-4	250	2100	780	1200
CAT 3066	260	1900	860	1350
CUM 1-10	260	1800	975	1200
CUM L-10 STC 12CGA	260	1600	975	1200
CUM L-10 STC 12CGB	260	1700	975	1200
VOLVO 260E/300AE	260	2100	800	1080
CAT 3306	270	2200	775	1400
DD 6-71TAC	270	2100	786	1200
CUM L10	270	1900	858	1300
CUM 1-10	270	2100	858	1400
CUM FORM 270	270	1800	1000	1300
CUM FLEET 270	270	1600	1020	1100
CAT 3116	275	2200	750	1560
CAT 3116 (GM MD)	275	2450	735	1560
CAT 3126	275	2200	800	1440
CAT 3126	275	2200	860	1440
DD 6-71T	275	2100	853	1200
FD-1460	275	2000	800	1300
FD-1460	275	1800	860	1300
INTL 530	275	2000	950	1300
INTL 530	275	2200	860	1300
INTL DT 466	275	2400	800	1600
MACK E6-275	275	2100	1020	1200
MACK EM6-275	275	2100	1038	1260
CAT 3176 ATMC	275	1800	1050	1100
CAT 3176 ELEC	275	1800	1050	1100
CAT 3176 ELEC	275	1800	975	1100
CAT 3176 ATMC	275	2100	1050	1200
MACK EM6-275L	275	1750	1305	1020
MACK EM7-275 (MECH)	275	1750	1305	1250
MACK EM7-275 (V MAC)	275	1750	1305	1250
CAT 3176B	275	1800	1050	1100
SERIES 50 8.5L-1 L-4	275	2100	890	1200
CAT C-10	280	1800	1050	1100
CAT C-10	280	2100	975	1100
CAT 3406	280	2100	1015	1200

IN SEQUENCE BY HORSEPOWER
NOTE: RATE VARIABLE HORSEPOWER ENGINES TO HIGHEST HORSEPOWER/TORQUE

ENGINE	HP	@ RPM	TORQUE	@ RPM
CUM L-10 STC 12CGC	280	1600	1050	1200
CUM L-10 STC 12CGD	280	1700	1050	1200
L10	280	1800	1050	1200
CUM MII 280E CELECT	280	2000	1050	1200
CUM MII 280E CELECT	280	1800	1050	1200
M11-280E	280	1800	1050	1200
	280	2000	1050	1200
M11 ESP1	280-330	1800	1050-1250	1200
VOLVO 280G/330BE	280	1700	925	1200
L10 285PT	285	2200	1020	1300
CUM FLEET 285	285	1600	1150	1100
CAT 3406	290	1800	1000	1200
CUM V-903C	295	2600	1000	1800
CAT 3116 (GM-MD)	300	2600	732	1560
CAT 3126	300	2200	800	1440
CAT 3126	300	2200	860	1440
DD 6-71T	300	2100	830	1400
CUM-FORM-VT-350	300	2100	860	1400
CUM L10	300	2100	950	1300
CUM L10 FORM	300	1900	950	1300
CUM-FORM-300	300	1800	1000	1300
CUM NTC300	300	2100	1000	1300
CUM L-10 STC 12CGH	300	1700	1150	1200
CAT 3406	300	2100	1054	1200
MACK E-6-300	300	1700	1112	1200
CUM FLT 300	300	1700	1150	1100
CAT 3176 ATMC	300	1800	1150	1100
CAT 3176 ELEC	300	1800	1050	1100
CAT 3176 ELEC	300	1800	975	1100
CAT 3176 ATMC	300	2100	1150	1300
INTL 530	300	2200	950	1300
INTL 530	300	2000	1050	1300
MACK EM6-300L	300	1750	1425	1020
MACK EM7-300 (MECH)	300	1750	1425	1020
MACK EM7-300VMAC	300	1750	1425	1020
MACK E7-300 (MECH)	300	1950	1083	1200
MACK E7-300(V MAC)	300	1700	1160	1200
CAT 3176B	300	1800	1050	1100
CAT 3306C	300	1900	1150	1200
DD 11.1 LITER	300	1800	1150	1200
SERIES 50 8.5L-1L-4	300	1800/2100	1000	1200
SERIES 55 12L-1L-6	300	1800	1150	1100
SERIES 60 11.1L-1L-6	300	1800	1150	1200
SERIES 92 9.05L-V6	300	2100	975	1200
VOLVO 300A/360CE	300	2100	925	1200
VOLVO 300CC/410DE	300	2100	955	1200
DD 8V71	304	2100	818	1400

IN SEQUENCE BY HORSEPOWER
NOTE: RATE VARIABLE HORSEPOWER ENGINES TO HIGHEST HORSEPOWER/TORQUE

ENGINE	HP	@ RPM	TORQUE	@ RPM
CAT C-10	305	1800	1150	1100
CAT C-10	305	2100	1150	1100
CAT 3406	310	1800	1090	1200
	310	2100	1139	1100
	310	1800	1140	1100
CAT 3406E	310	1800	1150	1200
CAT 3406E	310	1800	1250	1200
CAT 3406E MULTI TQ	310	1800	1150/1350	1200
CUM 1-10 310	310	1800	1150	1200
CUM N14 310	310	1800	1150	1350
CUM N14 STC 12CEH	310	1600	1250	1100
CUM N14 CELECT 12 CDK	310	1600	1250	1300
CUM N14 CELECT 12 CDR	310	1699	1450	1200
CUM M11ESP11	310-370	1800	1150	1350
CUM N14EAPI	310-390	1800	1250	1450
CUM M11 31 OE	310	2000	1150	1200
	310	1800	1150	1200
CUM L-10 STC 12CGG	310	1600	1150	1200
VOLVO 310B	310	1900	985	1200
CUM FORM 315	315	1800	1150	1300
CUM NTC 315	315	1800	1150	1300
SERIES 508.5L-1L-4L	315	1950/2100 1150	1200	
CAT C-10	325	2100	1250	1200
CAT 3176ATMC	325	1900	1225	1200
	325	2100	1225	1300
CAT 3406	325	2100	1050	1200
CAT 3176B	325	1800	1250	1200
MACK E7 325 VMAC	325	1800	1260	1250
CAT 3406	330	1600	1320	1200
CAT 3406E	330	1800	1350	1200
CUM 1-10 330E	330	1800	1250	1200
DD 6V92TA	330	2100	963	1200
CUM N14 330E	330	2100	1350	1200
	330	600	1350	1200
CUM M11 330E	330	2000	1350	1200
	330	800	1350	1200
CUM STC 12 CEA	330	1600	1350	1100
CUM STC 12 CEB	330	1600	1350	1100
CUM N14 CELECT 12 CDS	330	1600	1350	1100
DD 11.11-	330	1800	1150	1200
	300-330	1800	1150	1200

IN SEQUENCE BY HORSEPOWER
NOTE: RATE VARIABLE HORSEPOWER ENGINES TO HIGHEST HORSEPOWER/TORQUE

ENGINE	HP	@ RPM	TORQUE	@ RPM
DD 11.L	330	1800	1250	1200
	330-350	1800	1350	1200
	220-365	1800	1350	1200
SERIES 55 121-1L-6	330	1800/2000	1250	1100
SERIES 55 121-1L-6	330/350	1800	1250	1100
SERIES 55 121-1L-6	330/350	1800	1350	1100
SEREIS 60 11.1L-1L-6	330	1800	1150	1200
SERIES 60 11.1L-1L-6	300/330	1800	1150	1200
SERIES 60 11.1 L-1 L-6	330	1800	1150	1200
CAT C-10	335	1800	1250	1200
CAT C-10	335	1800	1350	1200
CUM NTC 350	350	2100	1120	1300
DD 6V92TA	350	2100	1020	1200
CUM FORM 350(90)	350	1800	1175	1300
CUM FORM 350(90)	350	1800	1200	1300
CUM NTC350(90)	350	2100	1200	1300
DD 11.1L	350	1800	1250	1200
MACK E6-350	350	1800	1277	1250
MACK E7-350	350	1800	1277	1250
MACK E7 350 VMAC	350	1800	1250	1250
CAT C-10	350	1800	1350	1200
CAT 3406B	350	2100	1320	1200
CAT 3406BEC	350	1800	1320	1200
CAT 3406C	350	1800	1350	1200
DD 12.7L	350	2100	1400	1200
CUM N14 350E	350	2100	1400	1200
	350	1800	1400	1200
CUM N14 STC 12CEJ	350	1600	1400	1100
CUM N14 STC 12CEK	350	1600	1350	1100
CUM N14 CELECT 12 CDI	350	1600	1400	1100
CUM N14 CELECT 12 CDI	350	1600	1350	1100
N 14ESPII	350-390	1800	1350	1500
M11350E	350	1800	1350	1200
CAT 3176B	350	1800	1350	1200
CAT 3406C	350	1800	1350	1200
DD 11.1L	350	1800	1250	1200
	350	1800	1350	1200
SERIES 55 121-1L-6	350	1800/2000	1250/1350	1100
SERIES 55 121-1L-6	350	1800/2000	1350	1100
SERIES 60 11.1-1L-6	350	1800	1250	1200
SERIES 60 11.1L-1L-6	330/350	1800	1250	1200
SERIES 60 11.1L-1L-6	350	2100	1250	1200
SERIES 60 11.1L-1L-6	350	2100	1250	1200
SERIES 92 9.051-V-6	350	2100	1020	1200
CAT C-12	355	1800	1350	1200
CAT C-12 MULTI TQ	355/410	1800	1350/1450	1200
CAT C-12 MULTI TQ	355/410	1800	1350/1550	1200

IN SEQUENCE BY HORSEPOWER
NOTE: RATE VARIABLE HORSEPOWER ENGINES TO HIGHEST HORSEPOWER/TORQUE

ENGINE	HP	@ RPM	TORQUE	@ RPM
CAT 3406E(94)	355	1800	1350	1200
	355	1800	1450	1200
CAT 3406E MULTI TQ	355	1800	1350/1450	1200
CAT C-12	360	2100	1350	1200
CUM NTC 365	365	1800	1320	1300
CUM FORM 365(90)	365	1800	1325	1300
DD 11.1L	365	1800	1350	1200
SERIES 55 12L-1L-6	365	1800/2000	1450	1100
SERIES 55 12L-1L-6	365/400	1800	1450	1100
SERIES 60 11.1L-1L-6	365	1800	1350	1200
SERIES 60 11.1 L-1L-6	330/365	1800	1350	1200
CUM M11 370	370	1800	1350	1200
	370	2000	1350	1200
CUM N14 370E	370	2100	1450	1200
	370	1800	1450	1200
CUM N14 12 CEC	370	1600	1400	1200
CUM N14 12 CED	370	1600	1400	1200
CUM N14 CELECT 12 CDB	370	1600	1400	1100
CUM N14 CELECT 12 CDS	370	1600	1550	1200
DD 12.7L	370	1800	1450	1200
DD 12.7L	370/400	1800	1450	1200
	370/430	1800	1450	1200
	370	2100	1450	1200
CAT C-10	370	1800	1350	1200
CAT C-10 MULTI	335/370	1800	1250/1350	1200
SERIES 60 12.7L-1L-6	370	1800	1450	1200
SERIES 60 12.7L-1L-6	370	2100	1450	1200
CAT 3406E	375	1800	1450	1200
CAT 3406E(94)	375	1800	1550	1200
CAT 3406E MULTI TQ	375	1800	1450/1550	1200
CAT 3406E MULTI TQ	375/435	1800	1450/1550	1200
MACK E7 375 VMAC	375	1800	1460	1250
CAT C-12	380	1800	1450	1200
CAT C-12 MULTI TQ	380/410	1800	1450/1550	1200
CAT 3406	380	2100	1285	1200
CAT C-12	390	2100	1450	1200
CUM NTC-FORM400	400	1800	1325	1300
DD 8V92TA	400	1800	1250	1200
CUM NTC400	400	2100	1250	1300
CUM FORM 400	400	1800	1250	1300
CAT 3406BEC	400	2100	1265	1300
	400	1800	1375	1260
CAT 3406B	400	2100	1375	1260
MACK E7 400	400	1800	1460	1250
CUM N14ESP3	400/460	1800	1450	1650
DD 12.7L	400	1800	1450	1200

IN SEQUENCE BY HORSEPOWER
NOTE: RATE VARIABLE HORSEPOWER ENGINES TO HIGHEST HORSEPOWER/TORQUE

ENGINE	HP	@ RPM	TORQUE	@ RPM
DD 12.7L	400	2100	1450	1200
CUM M-11	400	1800	1450	1200
CAT 3406	400	1900	1450	1250
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 92 12.11-V8	400	2100	1330	1200
CAT C-12	410	1800	1450	1200
CAT C-12	410	1800	1550	1200
CAT C-12	410	2100	1550	1200
CUM N14 410E	410	2100	1450	1200
	410	1800	1450	1200
CUM N14 STC 12 CEE	410	1600	1450	1200
CUM N14 STC 12 CEG	410	1600	1450	1200
CUM N14 CELECT 12 CEN	410	1600	1450	1200
CAT 3406E	410	1800	1450	1200
CAT 3406E(94)	410	1800	1550	1200
CAT 3408	420	1900	1460	1200
DD 12/7L	425	2100	1400	1200
CAT C-12 RCVBUS	425	2100	1450	1200
CAT 3406B	425	2100	1450	1200
CAT 3406C	425	1800	1550	1200
CAT 3406C	425	1900	1650	1200
MACK E7 427	427	1800	1560	1250
CUM N14 CELECT 12 CDC	430	1700	1450	1100
CUM N14 CELECT 12 CEP	430	1700	1550	1300
DD 12/7L	430	1800	1450	1200
	430	1800	1450	1200
	430	2100	1450	1200
	430	1800	1550	1200
	430	2100	1550	1200
DD 12.7L	430/470	1800	1550	1200
SERIES 60 12.7L-1 L-6	430	1800	1450	1200
SERIES 60 12.7L-1 L-6	430	2100	1450	1200
SERIES 60 12.7L-1 L-6	370/430	1800	1450	1200
SERIES 60 12.7L-1 L-6	370/430	2100	1450	1200
CAT 3406	435	1800	1550	1650
CAT 3406E(94)	435	1800	1650	1200
CAT 3406E	435	1800	1550	1200
CAT 3406E	435	2100	1650	1200
CAT 3406E	435	2100	1550	1200
CUM N14 435E	435	2100	1650	1200
	435	2100	1550	1200
CUM N14 435E	435	1800	1450	1200
DD 8V92TAC	440	2100	1250	1300
CUM 444	444	2100	1400	1500
CUM NTC444XT	444	2100	1400	1500

IN SEQUENCE BY HORSEPOWER
NOTE: RATE VARIABLE HORSEPOWER ENGINES TO HIGHEST HORSEPOWER/TORQUE

ENGINE	HP	@ RPM	TORQUE	@ RPM
DD 8V92TA	445	2100	1250	1300
CUM FORM 450	450	1900	1420	1300
CUM KT 450	450	2100	1350	1500
CAT 3408	450	2100	1350	1500
	450	2100	1460	1200
CAT 3406	455	1800	1460	1200
MACK E9 450	450	1900	1495	1300
SERIES 92 12.1L-V-8	450	2100	1425	1200
3406 CAT	455	2100	1650	1200
MACK E-7 454	454	1800	1560	1250
CUM N14 469E	460	2100	1650	1200
CUM N14 CELECT 12 CDJ	460	1700	1550	1100
DD 12.7L	470	2100	1450	1200
	470	1800	1550	1200
	470	2100	1550	1200
SERIES 60 12.7L-1 L-6	430/470	1800	1550	1200
SERIES 60 12.7L-1 L-6	430/470	2100	1550	1200
SERIES 60 12.7L-1L-6	470	1800	1550	1200
SERIES 60 12.7L-1L-6	470	2100	1450/1550	1200
CAT 3406	475	2100	1650	1750
CAT 3406E	475	2100	1650	1200
CAT 3406E	475	1800	1650	1200
CAT 3406E	475	1800	1750	1200
CAT 3406E	475	2100	1750	1200
DD 8V92TA	475	2100	1330	1300
CUM TWIN TURBO	475	2100	1430	1400
NTC 475	475	2100	1430	1400
CAT 3406E(94)	475	1800	1750	1200
DD 12.71	500	1800	1550	1200
	500	2100	1550	1200
CUM N14 500	500	1800	1750	1200
MACK E9 500	500	1900	1660	1300
CUM N14 500E	500	2100	1750	1200
CUM N14 500E	500	2100	1650	1200
	500	1750	1650	1600
CAT 3406E(94)	500	1800	1850	1200
CAT 3406	500	2100	1450	1850
CAT 3406	500	2100	1450	1200
CAT 3406	500	2100	1850	1200
SERIES 60 12.7L-1 L-6	500	1800	1550	1200
SERIES 60 12.7L-1 L-6	500	2100	1450/1550	1200
SERIES 92 12.1L-V8	500	2100	1470	1200
CAT 3406 510	510	1600	1850	1200
CUM N14 525	525	1800	1850	1200
CUM KT 525 (1983)	525	2100	1650	1300
CAT 3406	550	2100	1850	1200
CAT 3406E	550	1800	1850	1200
MACK E9	550	2100	1660	1300
CUM KTA 600 (1983)	600	2100	1650	1600
CAT 3406E	600	2100	2050	1200
CUM SIGNATURE 600	600	2100	2050	1200

Medium Duty Quick Reference

ACE	EATON	MERITOR	HALDEX	MID– AMERICA	UNIQUE
EZ107237-4CB	107237-8		N10713751CE	MU129044-37-DSCB	M129044-6F5
	107237-10				
	107237-22				
EZ107237-8CB	107237-8		N10723722CE	MU129044-37DSCB	M1290446F5NSP
	107237-10				
EZ107683-4CB	107683-4		N1076835CE	MU127747DSCB	M1277476F5
EZ107683-5CB	107683-5		N1076835CE	MU127747DSCB	M1277476F5
EZ107686-2CB	107342-11		N1076862CE	MU129055-37DSCB	M120955-6F5NSR
	107342-4				
	107342-12				
EZ107686-4CB	107342-11		N1076862CE	MU129055-37DSCB	M120955-6F5NSR
	107342-4				
	107342-12				
	107342-22				
EZ107915-1CB	107915-1		N107915CE		

Heavy Duty Quick Reference

ACE	EATON	MERITOR	HALDEX	MID– AMERICA	UNIQUE
EZ108035-82B		R141451	N10803582	127400DS	M108035-6A5
EZ108063-59A			N10806359	127400DSCB	M108063-6J5
EZ108034-82B	108034-82B	R140151	N10803482	127390DS	M108034-6A5
EZ108034-61B	108034-61B	R141101	N10803461		M108034-6F5
EZ108050-69B			N10805059	MU127390DSCB	M108050-6J5
EZ108050-59B	108050-59	R140401	N10805059	MU127390DSCB	M108050-6J5
	108034-59				
EZ208391-77B	108391-77B	R150155		127597DS	M108391-6A5
EZ208391-82B	108391-82B	R150155	N10839182	127597DS	M108391-6A5
EZ208391-81B	108391-81B	M151406	N10839181	127597DSCB	M1083916G5
EZ208391-82B	108391-82B	R150155	N108391-82	127597DS	M108391-6A5
EZ208391-74B	108391-74B	M151406	N10839174	MU129698SB10	M108391-5-G5
EZ208925-82B	108925-82B	R152705	N10892582	MU129698SB7	M10892511G5
EZ208935-51	108935-51	R151725	N10893551	MU129698SB9	M1089259G5
EZ208935-51H	108935-94	R153726	N10893594	MU15569812SB9	M1089259G5
EZ208925-82H	108925-1O	R151706	N10893515	MU15569812SB7	M10892514W5
	108925-20				
	108925-25				
EZ20839193B	108391-93B	R151405	N1089355A5	MU155698SB10	
EZ208391-93H		R151406	N10893593	MU15569812SB10	M1083915W5

TOP 10 SELLING

CLUTCHES

CLUTCH PART NUMBER	DESCRIPTION
EZ208925-82B	15.5 X 2 7 SPR 1700 TRQ
EZ208925-82H	15.5 X 2 7 SPR 2050 TRQ
EZ208391-74B	15.5 X 2 10 SPR 1650 TRQ
EZ107237-8CB	14 X 1.75 8 SPR 860 TRQ
EZ108050-59B	14 X 2 8 SPR 1400 TRQ
EZ208935-51H	15.5 X 2 9 SPR 2050 TRQ
EZ107683-5CB	14 X 1.75 8 SPR 620 TRQ
EZ208391-93B	15.5 X 2 10 SPR 1860 TRQ
EZ208935-51	15.5 X 2 9 SPR 1650 TRQ
EZ208391-81B	15.5 X 2 8 SPR 1400 TRQ

FLYWHEELS

FLYWHEEL PART NUMBER	DESCRIPTION
AF1821915C91	14” FLAT DT466
AF23509709	15” DETROIT SERIES 60
AF1818214C91	14” FLAT 7.3 444E
AF1265875	14” FLAT CAT 3116/3126
AF530GB3170	15” FLAT MACK E-TECH
AF1810855C93	14”FLAT DT 466
AF3921263	14” FLAT CUMMINS 5.9B
AF3071615	15” CUMMINS L10/ M11
AF4P4797	15” CAT 3406/3406E
AF3016495	14” POT CUMMINS NT855

ACCESSORIES

ACCESSORIES PART NUMBER	DESCRIPTION
B201	2” 2 PC. HINGED CLUTCH BRAKE
A240BP	2” TORQUE CLUTCH BRAKE
AB197BP	PILOT BEARING
AB197VBP	VITON BEARING 6306
AB197SBP	PILOT BEARING W/SNAP RING (MACK)
AK2468	MAJOR CLUTCH KIT
AK2200	2” MINOR CLUTCH KIT
A239BP	1.75” TORQUE CLUTCH BRAKE
AB197SVBP	VITON BEARING (MACK)
AK2175	1.75” MINOR CLUTCH KIT

NOTES:

Our 118,000 square foot manufacturing and distribution facility is located 60 miles southwest of St. Louis in Sullivan, Missouri.

Ace has been providing the highest quality clutches, clutch parts and assemblies to the heavy duty industry for over 40 years.

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