

# BRAKE APPLICATION GUIDE

## JAKE BRAKE® RETARDERS FOR CATERPILLAR ENGINES

### How to Use this Guide

#### 1. Begin by obtaining engine and vehicle information.

This is the first step to selecting brake kits or components. The more information you start with, the less you'll need to go back to the customer. Gather the following information about the engine and vehicle.

- Engine model
- Engine serial number
- Engine horsepower rating
- Determine whether the vehicle has ABS or not
- Determine the vehicle electrical system - 12 or 24 volt system, engine or isolated ground (isolated ground systems require dual-lead controls).
- If the vehicle already has an engine brake model installed, determine the engine brake model to determine proper parts and service information.
- Determine whether the vehicle has an automatic transmission. If the vehicle has an auto trans, kit and control group part numbers will not change, but some installation procedures will be different from those for manual transmissions. See Jacobs Service Letters for more information.

Note: in a few cases, special situations may apply or additional information may be required. Footnotes will point out these important cases in this guide.

#### 2. Find the information in the correct section of this guide.

To select a new brake kit for a vehicle:

1. Turn to the Current Applications section of this guide, beginning on page 2, and find the engine model and serial number.
2. Select the appropriate kit from the base kit columns.
3. Select the appropriate engine, cab, and clutch switch controls. "N/R" means a control is not required.

To determine the correct brake model(s) for an engine:

1. Turn to the Service Information section of this guide, beginning on page 5, and find the engine model and serial number.
2. Any brake model listed under the engine model and serial number may be used on this engine.

To determine service information for an engine brake:

1. Turn to the Service Information section of this guide, beginning on page 5, and find the engine model, serial number, and horsepower for the engine.
2. Find the slave piston lash setting and/or trigger valve settings from the appropriate column.

To choose a tune-up kit for an engine brake:

1. Turn to the Service Information section of this guide, beginning on page 5, and find the engine model and serial number, and engine brake model being used on the vehicle.
2. Find the appropriate tune-up kit in the Tune-up Kit column.

Engine Model	Engine S/N Prefix	Engine HP	Current Brake Model	Engine Control Type	12V Base Kit	24V, Dual Lead Base Kit	24V, Single Lead Base Kit	Engine Control Group (non-ABS)	Engine Control Group (ABS)	Cab Control Group	Clutch Switch Group	
<b>C-18</b>	<b>C-18</b>	CJP1 and up	All	340C	Electronic	194-4273	194-4274	N/A	N/R	N/R	143-6652 <sup>1</sup>	N/R
		MDP1 and up	All	340C	Electronic	194-4273	194-4274	N/A	N/R	N/R	143-6652 <sup>1</sup>	N/R
		MEP1 and up	All	340C	Electronic	194-4273	194-4274	N/A	N/R	N/R	143-6652 <sup>1</sup>	N/R
<b>C-16</b>	<b>C-16</b>	7CZ03834 and up	All	340D	Electronic	221-1188	221-1196	N/A	N/R	N/R	143-6652 <sup>1</sup>	N/R
		7CZ1-03833	575 and 600	340C	Electronic	194-4273	194-4274	N/A	N/R	N/R	143-6652 <sup>1</sup>	N/R
		WIA1 and up	All	340C	Electronic	194-4273	194-4274	N/A	N/R	N/R	143-6652 <sup>1</sup>	N/R
<b>C-15</b>	<b>C-15</b>	BXS1546 and up	All	340E	Electronic	242-1514	242-1515	N/A	N/R	N/R	143-6652 <sup>1</sup>	N/R
		BXS1-1 545	All	340C	Electronic	194-4273	194-4274	N/A	N/R	N/R	143-6652 <sup>1</sup>	N/R
		MBN1 and up	All	340D	Electronic	221-1188	221-1196	N/A	N/R	N/R	143-6652 <sup>1</sup>	N/R
		6NZ83126 and up	All	340D	Electronic	221-1188	221-1196	N/A	N/R	N/R	143-6652 <sup>1</sup>	N/R
		6NZ1-83125	All	340C	Electronic	194-4273	194-4274	N/A	N/R	N/R	143-6652 <sup>1</sup>	N/R
		C2A (Except 10R9846)	All	340C	Electronic	194-4273	194-4274	N/A	N/R	N/R	143-6652	N/R
		C2A (10R9846)	All	340D	Electronic	221-1188	221-1196	N/A	N/R	N/R	143-6652	N/R
<b>3406</b>	<b>3406E</b>	1LW33334 and up	All	340D	Electronic	221-1188	221-1196	N/A	N/R	N/R	143-6652 <sup>1</sup>	N/R
		1LW1-33333	All	340C	Electronic	194-4273	194-4274	N/A	N/R	N/R	143-6652 <sup>1</sup>	N/R
		1MM	All	340C	Electronic	194-4273	194-4274	N/A	N/R	N/R	143-6652 <sup>1</sup>	N/R
		2WS	All	340C	Electronic	194-4273	194-4274	N/A	N/R	N/R	143-6652 <sup>1</sup>	N/R
		5DS	All	340C	Electronic	194-4273	194-4274	N/A	N/R	N/R	143-6652 <sup>1</sup>	N/R
		5EK	All	340A	Electronic	148-7493	148-7494	N/A	N/R	N/R	143-6652 <sup>1</sup>	N/R
		4AS	All	340C	Electronic	194-4273	194-4274	N/A	N/R	N/R	143-6652	N/R
		6TS	All	340A	Electronic	148-7493	148-7494	N/A	N/R	N/R	143-6652 <sup>1</sup>	N/R
	9AP	All	340C	Electronic	194-4273	194-4274	N/A	N/R	N/R	143-6652 <sup>1</sup>	N/R	
	<b>3406C</b>	3ER	All	346D	Mechanical	148-7440	148-7449	148-7422	143-6608	143-6608	N/R	N/R
			350 and up <sup>2</sup>	349A	Mechanical	148-7430	N/A	N/A	143-6608	143-6608	N/R	N/R
		3ZJ	All	346D	Mechanical	148-7440	148-7449	148-7422	143-6608	143-6608	N/R	N/R
			350 and up <sup>2</sup>	349A	Mechanical	148-7430	N/A	N/A	143-6608	143-6608	N/R	N/R
		4CK	All	346D	PEEC III	148-7440	148-7449	148-7422	143-6592	143-6593	N/R	N/R
			350 and up <sup>2</sup>	349A	PEEC III	148-7430	N/A	N/A	143-6592	143-6593	N/R	N/R
		5KJ	All	346D	Mechanical	148-7440	148-7449	148-7422	143-6608	143-6608	N/R	N/R
			350 and up <sup>2</sup>	349A	Mechanical	148-7430	N/A	N/A	143-6608	143-6608	N/R	N/R
8PN		All	346D	Mechanical	148-7440	148-7449	148-7422	143-6608	143-6608	N/R	N/R	
	350 and up <sup>2</sup>	349A	Mechanical	148-7430	N/A	N/A	143-6608	143-6608	N/R	N/R		
11N	All	346D	Mechanical	148-7440	148-7449	148-7422	143-6608	143-6608	N/R	N/R		
41Z	All	346D	Mechanical	148-7440	148-7449	148-7422	143-6608	143-6608	N/R	N/R		

Engine Model	Engine S/N Prefix	Engine HP	Current Brake Model	Engine Control Type	12V Base Kit	24V, Dual Lead Base Kit	24V, Single Lead Base Kit	Engine Control Group (non-ABS)	Engine Control Group (ABS)	Cab Control Group	Clutch Switch Group	
<b>3406B</b>	2EK	All	346D	PEEC	148-7440	148-7449	148-7422	148-7416	148-7416	N/R	143-6456 <sup>3</sup>	
		350 and up <sup>2</sup>	349A	PEEC	148-7430	N/A	N/A	148-7416	148-7416	N/R	143-6456 <sup>3</sup>	
	3ZJ	All	346D	Mechanical	148-7440	148-7449	148-7422	143-6608	143-6608	N/R	N/R	
		350 and up <sup>2</sup>	349A	Mechanical	148-7430	N/A	N/A	143-6608	143-6608	N/R	N/R	
	4CK	All	346D	PEEC III	148-7440	148-7449	148-7422	143-6592	143-6593	N/R	N/R	
		350 and up <sup>2</sup>	349A	PEEC III	148-7430	N/A	N/A	143-6592	143-6593	N/R	N/R	
	4MG	All	346D	Mechanical	148-7440	148-7449	148-7422	143-6608	143-6608	N/R	N/R	
		350 and up <sup>2</sup>	349A	Mechanical	148-7430	N/A	N/A	143-6608	143-6608	N/R	N/R	
	5KJ	All	346D	Mechanical	148-7440	148-7449	148-7422	143-6608	143-6608	N/R	N/R	
		350 and up <sup>2</sup>	349A	Mechanical	148-7430	N/A	N/A	143-6608	143-6608	N/R	N/R	
	5YG	All	346D	PEEC	148-7440	148-7449	148-7422	148-7416	148-7416	N/R	143-6456 <sup>3</sup>	
		350 and up <sup>2</sup>	349A	PEEC	148-7430	N/A	N/A	148-7416	148-7416	N/R	143-6456 <sup>3</sup>	
	7FB39278 and less	All	346D	Mechanical	148-7440	148-7449	148-7422	143-6608	143-6608	N/R	N/R	
	7FB39279 and up	All	346D	Mechanical	148-7440	148-7449	148-7422	143-6608	143-6608	N/R	N/R	
		350 and up <sup>2</sup>	349A	Mechanical	148-7430	N/A	N/A	143-6608	143-6608	N/R	N/R	
	8TC	All	346D	PEEC	148-7440	148-7449	148-7422	148-7416	148-7416	N/R	143-6456 <sup>3</sup>	
350 and up <sup>2</sup>		349A	PEEC	148-7430	N/A	N/A	148-7416	148-7416	N/R	143-6456 <sup>3</sup>		
<b>3406</b>	11N	All	346D	Mechanical	148-7440	148-7449	148-7422	143-6608	143-6608	N/R	N/R	
	92U	All	346D	Mechanical	148-7440	148-7449	148-7422	143-6608	143-6608	N/R	N/R	
<b>3176B</b>	9CK	All	310A/3176	Electronic	148-7495	148-7496	N/A	N/R	N/R	143-6652 <sup>1</sup>	N/A	
	<b>3176</b>	2YG	All	317D	PWM	148-7476	N/A	N/A	156-5608	156-5608	N/R	143-6456 <sup>3</sup>
		7LG07499 and less	All	317D	Electronic	148-7476	N/A	N/A	143-6602	143-6601	N/R	143-6456 <sup>3</sup>
		7LG07500 and up	275-300	317D	Electronic	148-7476	N/A	N/A	143-6602	143-6601	N/R	143-6456 <sup>3</sup>
325-350	317E		Electronic	148-7464	N/A	N/A	143-6602	143-6601	N/R	143-6456 <sup>3</sup>		

Engine Model	Engine S/N Prefix	Engine HP	Current Brake Model	Engine Control Type	12V Base Kit	24V, Dual Lead Base Kit	24V, Single Lead Base Kit	Engine Control Group (non-ABS)	Engine Control Group (ABS)	Cab Control Group	Clutch Switch Group		
<b>C-10</b>	<b>C-10</b>	MBJ and up	All	312A	Electronic	148-7477	148-7478	N/A	N/R	N/R	143-6652 <sup>1</sup>	N/R	
		2PN	All	310A	Electronic	148-7497	148-7498	N/A	N/R	N/R	143-6652 <sup>1</sup>	N/R	
		3CS	All	310A	Electronic	148-7497	148-7498	N/A	N/R	N/R	143-6652 <sup>1</sup>	N/R	
		8YS	All	310A	Electronic	148-7497	148-7498	N/A	N/R	N/R	143-6652 <sup>1</sup>	N/R	
<b>C-12</b>	<b>C-12</b>	MBL and up	All	312A	Electronic	148-7477	148-7478	N/A	N/R	N/R	143-6652 <sup>1</sup>	N/R	
		1YN	All	312A	Electronic	148-7477	148-7478	N/A	N/R	N/R	143-6652 <sup>1</sup>	N/R	
		2KS	All	312A	Electronic	148-7477	148-7478	N/A	N/R	N/R	143-6652 <sup>1</sup>	N/R	
		9NS	All	312A	Electronic	148-7477	148-7478	N/A	N/R	N/R	143-6652 <sup>1</sup>	N/R	
<b>3306</b>	<b>3306C</b>	7RJ	All with 1/2" push tubes <sup>4</sup>	336A	Mechanical	148-7451 <sup>4</sup>	N/A	148-7452 <sup>4</sup>	N/R	N/R	N/R	N/R	
			All with 7/16" push tubes <sup>4</sup>	C336	Mechanical	143-6718	136-3772 <sup>5</sup>	148-7407	N/R	N/R	N/R	N/R	
	9TL	All with 1/2" push tubes <sup>4</sup>	336A	Mechanical	148-7451 <sup>4</sup>	N/A	148-7452 <sup>4</sup>	N/R	N/R	N/R	N/R	N/R	
		All with 7/16" push tubes <sup>4</sup>	C336	Mechanical	143-6718	136-3772 <sup>5</sup>	148-7407	N/R	N/R	N/R	N/R	N/R	
	<b>3306B</b>	63Z3300 and up	All	C336	Mechanical	143-6718	136-3772 <sup>5</sup>	148-7407	N/R	N/R	N/R	N/R	N/R
		5KD	All	C336	Mechanical	143-6718	136-3772 <sup>5</sup>	148-7407	N/R	N/R	N/R	N/R	N/R
13Z		All	C336	Mechanical	143-6718	136-3772 <sup>5</sup>	148-7407	N/R	N/R	N/R	N/R	N/R	
<b>3306</b>	76R6115 and up	All	C336	Mechanical	143-6718	136-3772 <sup>5</sup>	148-7407	N/R	N/R				

<b>Notes</b>	N/R = Not Required (parts are included in the base kit or engine control group if necessary for installation)
	N/A = No Application exists
	<sup>1</sup> Special switch with gold contacts. May not be required if vehicle has controls pre-installed; however, low-resistance gold-contact switches must be used with this engine.
	<sup>2</sup> Air-to-air-after-cooled engines only. Either Model 349A or Model 346D can be installed on these engines. Model 349A provides up to 30% more retarding horsepower over Model 346D on these engines.
	<sup>3</sup> Clutch Switch Group not required on vehicles with cruise control installed (uses existing clutch switch).
<sup>4</sup> Either Model 336A or Model C336 may be installed on these engines. Model 336A provides up to 35% more retarding horsepower than Model C336. Model 336A requires 1/2" push tubes, which are included in kits P/N 148-7451 and 148-7452.	
<sup>5</sup> Depending on vehicle configuration, P/N 143-2586 Cab Control Group and P/N 143-6499 Engine Control Group may be required for installation.	

<b>Engine Model</b>	Engine S/N Prefix	Engine HP	Current Brake Model	Engine Control Type	12V In -pipe Base Kit <sup>1</sup>	12V Turbo-mount Base Kit <sup>2</sup>	Engine Control Group	
<b>C9</b>		9DG	Product available July-August 2004					
<b>C7</b>	All	All, vehicle without air supply	EX3126B/TM3126B	Electronic	156-4164	177-9547	148-7412 <sup>3</sup>	
	All	All, vehicle has air supply	EX3126B/TM3126B	Electronic	156-4164	177-9547	148-7412	
<b>3126</b>	<b>3126E</b>	All, vehicle without air supply	EX3126B/TM3126B	Electronic	156-4163	177-9547	1487412 <sup>3</sup>	
		All, vehicle has air supply	EX3126B/TM3126B	Electronic	156-4164	177-9547	148-7412	
	<b>3126B</b>	All, vehicle without air supply	EX3126B/TM3126B	Electronic	156-4163	177-9547	148-7412 <sup>3</sup>	
		All, vehicle has air supply	EX3116/3126	Electronic	156-4164	177-9547	148-7412	
	<b>3126</b>	All, vehicle without air supply	EX3116/3126	Electronic	148-7471	N/A	148-7412 <sup>3</sup>	
<b>3116</b>	2BK29931	All, vehicle has air supply	EX3116/3126	Mechanical	148-7467	N/A	148-7468	
	<b>3116</b> and up	All, vehicle without air supply	EX3116/3126	Mechanical	148-7471	N/A	148-7468 <sup>3</sup>	
	2BK	200-275, vehicle has air supply	EX3116/3126	Mechanical	148-7467	N/A	148-7468	
		after 8/92	200-275, vehicle without air supply	EX3116/3126	Mechanical	148-7471	N/A	148-7468 <sup>3</sup>
	2BK between	All, vehicle has air supply	<sup>4</sup>	Mechanical	148-7467	N/A	148-7468	
	91 & 8/92	All, vehicle without air supply	<sup>4</sup>	Mechanical	148-7471	N/A	148-7468 <sup>3</sup>	
	7SF	215-250, vehicle has air supply	<sup>4</sup>	Mechanical	148-7467	N/A	148-7468	
		215-250, vehicle without air supply	<sup>4</sup>	Mechanical	148-7471	N/A	148-7468 <sup>3</sup>	
	9GK	All, vehicle has air supply	EX3116/3126	Mechanical	148-7467	N/A	148-7468	
		All, vehicle without air supply	EX3116/3126	Mechanical	148-7471	N/A	148-7468 <sup>3</sup>	
	9YN	All, vehicle has air supply	EX3116/3126	Mechanical	148-7467	N/A	148-7468	
	All, vehicle without air supply	EX3116/3126	Mechanical	148-7471	N/A	148-7468 <sup>3</sup>		

<b>Notes</b>	N/A = No Application exists
	<sup>1</sup> Adapter pipes available (5 inch to 4 inch)
	<sup>2</sup> Turbo-mount kits eliminate cutting and welding of exhaust pipe during installation. However, in turbo-mount applications, the exhaust brake assembly extends approximately 3" from the turbo outlet. Ensure there is adequate clearance between all exhaust components and vehicle components prior to installation.
	<sup>3</sup> Vehicles without on-board air supply also require Pneumatic Group with Air Supply, P/N 159-9774, and Wire Harness Group, P/N 159-9770.
	<sup>4</sup> Model EX3116/3126 may be used if the engine is converted for higher backpressure with upgrade parts. See Product Advisory 94-2.

Engine Model	Engine S/N Prefix	Brake Model	Engine HP	Brake Lash Setting	Adjusting Tool P/N	Trigger Cyl. 1	Adjustment Cyl. 2-6	Tune-up Kit	
<b>C18</b>	<b>C18</b>	CJP1 and up	340C	All Ratings	.040"	150-7227	N/A	N/A	143-6628
		MDP1 and up	340C	All Ratings	.040"	150-7227	N/A	N/A	143-6628
		MEPT and up	340C	All Ratings	.040"	150-7227	N/A	N/A	143-6628
<b>C16</b>	<b>C16</b>	7CZ03834 and up	340D	All Ratings	.025"	149-6114	N/A	N/A	143-6628
		7CZ1 - 03833	340C	575 and 600	0.037"	155-5239	N/A	N/A	143-6628
			340B	575 and 600	0.037"	155-5239	N/A	N/A	143-6628
		WIA1 and up	340C	All Ratings	.040"	150-7227	N/A	N/A	143-6628
<b>C15</b>	<b>C15</b>	BXS1546 and up	340E	All Ratings	0.033"	155-5238	N/A	N/A	143-6628
		BXS1 - 1545	340C	All Ratings	0.035"	149-0114	N/A	N/A	143-6628
		MBN1 and up	340D	All Ratings	0.030"	149-0049	N/A	N/A	143-6628
		C2A (10R9846)	340D	All Ratings	0.030"	149-0049	N/A	N/A	143-6628
		6NZ83126 and up	340D	All Ratings	0.025"	149-6114	N/A	N/A	143-6628
		6NZ1 - 83125	340C	410 and under	0.037"	155-5239	N/A	N/A	143-6628
		6NZ1 - 83125	340C	435 and up	0.033"	155-5238	N/A	N/A	143-6628
			340B	435 and up	0.033"	155-5238	N/A	N/A	143-6628
		6NZ	340B	410 and under	0.037"	155-5239	N/A	N/A	143-6628
				410 and under	0.037"	155-5239	N/A	N/A	143-6628
				435 and up	0.033"	155-5238	N/A	N/A	143-6628
		C2A (Except 10R9846)	340C	410 and under	0.037"	155-5239	N/A	N/A	143-6628
				435 and up	0.033"	155-5238	N/A	N/A	143-6628
375/435 multitorque rating	0.033"			155-5238	N/A	N/A	143-6628		
<b>3406</b>	<b>3406E</b>	1LW33334 and up	340D	All Ratings	0.025"	149-6114	N/A	N/A	143-6628
			340C	435 and up	0.027"	149-0028	N/A	N/A	143-6628
		1LW1-33333	340B	410 and under	0.033"	155-5238	N/A	N/A	143-6628
				435 and up	0.027"	149-0028	N/A	N/A	143-6628
		1MM	340C	410 and under	0.033"	155-5238	N/A	N/A	143-6628
				435 and up	0.027"	149-0028	N/A	N/A	143-6628
		1MM	340B	410 and under	0.033"	155-5238	N/A	N/A	143-6628
				435 and up	0.027"	149-0028	N/A	N/A	143-6628
		2WS	340C	410 and under	0.037"	155-5239	N/A	N/A	143-6628
				435 and 550	0.033"	155-5238	N/A	N/A	143-6628
		340B	340C	410 and under	0.037"	155-5239	N/A	N/A	143-6628
				435 and up	0.033"	155-5238	N/A	N/A	143-6628
				410 and under	0.037"	155-5239	N/A	N/A	143-6628
		5DS	340C	410 and under	0.037"	155-5239	N/A	N/A	143-6628
				600	0.037"	155-5239	N/A	N/A	143-6628
		5DS	340B	410 and under	0.037"	155-5239	N/A	N/A	143-6628
				600	0.037"	155-5239	N/A	N/A	143-6628
		5EK01820 and below	340A	410 and under	0.027"	149-0028	N/A	N/A	143-6628
				435 and up	0.030"	149-0049	N/A	N/A	143-6628
		5EK01820 and below	340	410 and under	0.027"	149-0028	N/A	N/A	143-6628
				435 and up	0.027"	149-0028	N/A	N/A	143-6628
		5EK01821 and up	340A	410 and under	0.027"	149-0028	N/A	N/A	143-6628
				435 and up	0.030"	149-0049	N/A	N/A	143-6628
		4AS	340C	410 and under	0.027"	149-0028	N/A	N/A	143-6628
				All Ratings	0.027"	149-0028	N/A	N/A	143-6628
		6TS	340A	410 and under	0.027"	149-0028	N/A	N/A	143-6628
				435 and up	0.030"	149-0049	N/A	N/A	143-6628
9AP	340C	410 and under	0.027"	149-0028	N/A	N/A	143-6628		
		All	0.037"	155-5239	N/A	N/A	143-6628		
9AP	340B	410 and under	0.027"	149-0028	N/A	N/A	143-6628		
		All	0.037"	155-5239	N/A	N/A	143-6628		
<b>3406C</b>	<b>3406C</b>	3ER	349A	All except 400	0.018"	149-0054	0.100"	0.100"	143-6622
			400	0.018"	149-0054	0.130"	0.095"	143-6622	
		3ER	346D	365-460	0.090"	149-0050	N/A	N/A	143-6479
				310-350	0.080"	149-0051	N/A	N/A	143-6479
		3ZJ16182 and up	349A	All except 400	0.018"	149-0054	0.100"	0.100"	143-6622
				400	0.018"	149-0054	0.130"	0.095"	143-6622
		3ZJ16182 and up	346D	365-460	0.090"	149-0050	N/A	N/A	143-6479
				310-350	0.080"	149-0051	N/A	N/A	143-6479
		4CK	349A	All except 400	0.018"	149-0054	0.100"	0.100"	143-6622
				400	0.018"	149-0054	0.130"	0.095"	143-6622
		4CK	346D	All except 460	0.067"	134-2836	N/A	N/A	143-6479
				460	0.090"	149-0050	N/A	N/A	143-6479
		5KJ	349A	All except 400	0.018"	149-0054	0.100"	0.100"	143-6622
				400	0.018"	149-0054	0.130"	0.095"	143-6622
		5KJ	346D	365-460	0.090"	149-0050	N/A	N/A	143-6479
310-350	0.080"			149-0051	N/A	N/A	143-6479		
8PN	349A	All except 400	0.018"	149-0054	0.100"	0.100"	143-6622		
		400	0.018"	149-0054	0.130"	0.095"	143-6622		
8PN	346D	All	0.080"	149-0051	N/A	N/A	143-6479		
		All	0.067"	149-0051	N/A	N/A	143-6479		
11N03780 and up	346D	All	0.067"	149-0051	N/A	N/A	143-6479		
41Z	346D	All	0.067"	149-0051	N/A	N/A	143-6479		

Engine Model	Engine S/N Prefix	Brake Model	Engine HP	Brake		Trigger Adjustment		Tune-up Kit
				Lash Setting	Adjusting Tool P/N	Cyl. 1	Cyl. 2-6	
<b>3406</b>	2EK	349A	All except 400	0.018"	149-0054	0.100"	0.100"	143-6622
			400	0.018"	149-0054	0.130"	0.095"	143-6622
	346D	All except 460	0.067"	134-2836	N/A	N/A	143-6479	
		460	0.090"	149-0050	N/A	N/A	143-6479	
	3ZJ16181 and below	349A	All except 400	0.018"	149-0054	0.100"	0.100"	143-6622
			400	0.018"	149-0054	0.130"	0.095"	143-6622
	346D	All except 400	0.080"	149-0051	N/A	N/A	143-6479	
		400	0.067"	134-2836	N/A	N/A	143-6479	
	4CK	349A	All except 400	0.018"	149-0054	0.100"	0.100"	143-6622
			400	0.018"	149-0054	0.130"	0.095"	143-6622
	346D	All except 460	0.067"	134-2836	N/A	N/A	143-6479	
		460	0.090"	149-0050	N/A	N/A	143-6479	
	4MG	349A	All except 400	0.018"	149-0054	0.100"	0.100"	143-6622
			400	0.018"	149-0054	0.130"	0.095"	143-6622
		C346B <sup>1</sup>	All	0.070"	149-0052	N/A	N/A	143-6479
		C346B+ <sup>1</sup>	All	0.080"	149-0051	N/A	N/A	143-6479
		C346C	All	0.080"	149-0051	N/A	N/A	143-6479
	346D	All	0.080"	149-0051	N/A	N/A	143-6479	
	5KJ	349A	All except 400	0.018"	149-0054	0.100"	0.100"	143-6622
			400	0.018"	149-0054	0.130"	0.095"	143-6622
	346D	all except 400	0.080"	149-0051	N/A	N/A	143-6479	
		400	0.067"	134-2836	N/A	N/A	143-6479	
	5YG	349A	All except 400	0.018"	149-0054	0.100"	0.100"	143-6622
			400	0.018"	149-0054	0.130"	0.095"	143-6622
		C346B <sup>1</sup>	All	0.070"	149-0052	N/A	N/A	143-6479
		C346B+ <sup>1</sup>	All	0.080"	149-0051	N/A	N/A	143-6479
		C346C	All	0.080"	149-0051	N/A	N/A	143-6479
	346D	All	0.080"	149-0051	N/A	N/A	143-6479	
	7FB39278 and less	C346B <sup>1</sup>	All	0.070"	149-0052	N/A	N/A	143-6479
		C346B+ <sup>1</sup>	All	0.080"	149-0051	N/A	N/A	143-6479
		C346C	All	0.080"	149-0051	N/A	N/A	143-6479
		346D	All	0.080"	149-0051	N/A	N/A	143-6479
	7FB39279 and up	349A	All except 400	0.018"	149-0054	0.100"	0.100"	143-6622
			400	0.018"	149-0054	0.130"	0.095"	143-6622
		C346B <sup>1</sup>	All	0.070"	149-0052	N/A	N/A	143-6479
		C346B+ <sup>1</sup>	All	0.080"	149-0051	N/A	N/A	143-6479
		C346C	All	0.080"	149-0051	N/A	N/A	143-6479
	346D	All	0.080"	149-0051	N/A	N/A	143-6479	
	8TC	349A	All except 400	0.018"	149-0054	0.100"	0.100"	143-6622
			400	0.018"	149-0054	0.130"	0.095"	143-6622
C346B <sup>1</sup>		All	0.070"	149-0052	N/A	N/A	143-6479	
C346B+ <sup>1</sup>		All	0.080"	149-0051	N/A	N/A	143-6479	
C346C		All	0.080"	149-0051	N/A	N/A	143-6479	
346D	All	0.080"	149-0051	N/A	N/A	143-6479		
<b>3406</b>	11N03779 and below	C346	All	0.067"	149-0053	N/A	N/A	N/A
		C346A	All	0.067"	149-0053	N/A	N/A	143-6479
		C346B	All	0.067"	149-0053	N/A	N/A	143-6479
		C346C	All	0.067"	149-0053	N/A	N/A	143-6479
		346D	All	0.067"	149-0053	N/A	N/A	143-6479
	92U	C346	All	0.060"	149-0053	N/A	N/A	N/A
		C346A	All	0.060"	149-0053	N/A	N/A	143-6479
		C346B	All	0.060"	149-0053	N/A	N/A	143-6479
		C346C	All	0.060"	149-0053	N/A	N/A	143-6479
		346D	All	0.060"	149-0053	N/A	N/A	143-6479

<sup>1</sup> Model C346B standard engine brakes use a 3-point mounting system. C346B engine brakes with the optional B+ upgrade kit (P/N 156-5168) use a 4-point mounting system.



Engine Model	Engine S/N Prefix	Brake Model	Engine HP	Brake Lash Setting	Adjusting Tool P/N	Trigger Cyl. 1	Adjustment Cyl. 2-6	Tune-up Kit	
<b>3176</b>	<b>3176B</b>	9CK	310A	All	0.025"	149-6114	N/A	N/A	143-6626
	<b>3176</b>	2YG	C317	All	0.045"	149-0056	N/A	N/A	143-6576
			C317A	All	0.045"	149-0056	N/A	N/A	143-6576
			317B	All	0.045"	149-0056	N/A	N/A	143-6576
			317D	All	0.045"	149-0056	N/A	N/A	143-6626
		7LG07500 and up	317B	275-300	0.050"	149-0058	N/A	N/A	143-6576
			317C	325-350	0.020"	149-0055	N/A	N/A	143-6576
			317D	275-300	0.045"	149-0056	N/A	N/A	143-6626
			317E	325-350	0.020"	149-0055	N/A	N/A	143-6626
		7LG07499 and less	C317	All	0.050"	149-0058	N/A	N/A	143-6576
			C317A	All	0.050"	149-0058	N/A	N/A	143-6576
	317B		All	0.050"	149-0058	N/A	N/A	143-6576	
	317D		All	0.045"	149-0056	N/A	N/A	143-6626	
<b>C-10</b>	<b>C-10</b>	MBJ1 AND UP	312A	All	0.055"	N/A	N/A	N/A	143-6626
		2PN	310A	All	0.025"	149-6114	N/A	N/A	143-6626
		3CS	310A	All	0.025"	149-6114	N/A	N/A	143-6626
		8YS	310A	All	0.025"	149-6114	N/A	N/A	143-6626
<b>C-12</b>	<b>C-12</b>	MBL1 AND UP	312A	All	0.055"	N/A	N/A	N/A	143-6626
		1YN	312A	All	0.045"	149-0056	N/A	N/A	143-6626
		2KS	312A	All	0.040"	150-7227	N/A	N/A	143-6626
		9NS	312A	All	0.040"	150-7227	N/A	N/A	143-6626
<b>3306</b>	<b>3306C</b>	7RJ with 1/2" push tubes	336A	All	0.135"	149-0059	N/A	N/A	143-6623
		7RJ with 7/16" push tubes	C336	All	0.035"	149-0114	N/A	N/A	143-6623
		9TL with 1/2" push tubes	336A	All	0.135"	149-0059	N/A	N/A	143-6623
		9TL with 7/16" push tubes	C336	All	0.035"	149-0114	N/A	N/A	143-6623
	<b>3306B</b>	13Z	C336	All	0.035"	149-0114	N/A	N/A	143-6623
		5KD	C336	All	0.035"	149-0114	N/A	N/A	143-6623
	<b>3306</b>	63Z3300 and up	C336	All	0.035"	149-0114	N/A	N/A	143-6623
		76R6115 and up	C336	All	0.035"	149-0114	N/A	N/A	143-6623
<b>3116 3126 3126B 3126E C7</b>	3116/3126 and C7 engines use the Jacobs Exhaust Brake®. No field adjustment required or possible.								
	Air Cylinder Replacement group is P/N 177-9601 Socket Joint is P/N 180-5171								