Product Bulletin

July 2008

Cat H35D S-H180D S
Hydraulic Hammers

For Dealer Sales Personnel

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The Caterpillar hammer range consists of 20 models designed for Cat machines and competitive machines weighing from 1.1 to 75 tons. These hammers may be divided into two primary categories according to their size: **Small hammers** (H35D S - H100) - all D-series small hammers in sound suppressed version as standard; H70 to H100 available in both standard and sound suppressed version. **Large Hammers** (H115 S - H180D S) - sound suppressed as standard.

The purpose of this product bulletin is to assist in the hammer selection process. There are three sections: Overview, Matching Guide, and Specifications.

The **Overview** section provides a general introduction to hammers including application and safety information as well as features and benefits for small and large Caterpillar hammers.

The **Matching Guide** section begins with principles of selection followed by compatibility information for current and non-current Cat machines as well as matching information for competitive machines. In addition, this section includes general productivity figures when working in different materials since production can be a crucial factor in determining hammer selection, particularly in quarrying and mining applications.

Finally, the **Specification** section provides hammer technical specifications as well as information regarding brackets, lines, and tool bits. This information is given on a model by model basis and includes Cat reference numbers to assist in the order placement process.

General Summary

Sewer and Water - The hammer can be used on pockets of rock that slow down production and is also effective in breaking up old concrete pipes, manholes, etc.

Road Construction – A hammer is an essential tool during construction, improvements, and upgrading. A hammer is very productive removing existing curbs, traffic islands, ramps, or sections of concrete. With special tools, it can cut asphalt.

Bridge Renewal - Hammers are used to remove old bridge surfaces, railing supports, abutments, retaining walls, etc.

Demolition - The hammer-equipped machine is often a key tool in industrial demolition. It can break up fallen wall sections and floor sections as well foundations, or other brick and concrete structures.

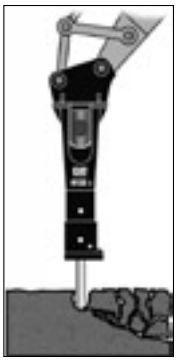
Mining and Aggregate - Hammers can break oversized material to avoid secondary blasting, and to size riprap. Hammers can also be installed near crushers to prepare material for crushing.

Trenching/Primary Excavation - In soft or layered rock materials, the hydraulic hammer with a moil or chisel point is an effective tool in excavation.

Direct Quarrying - In many types of limestone, direct quarrying with large hydraulic hammers can prove cost effective, especially where blasting is prohibited or restricted.

A hammer does not have to be a full time attachment for these applications. It can be replaced by a bucket in a short time allowing the machine to be used for digging, loading, lifting, or other tasks.

Breaking Techniques

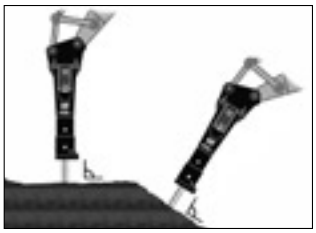


Penetrative/Primary Breaking- with moil or chisel tool

- Concrete
- Trench work
- Mass excavation

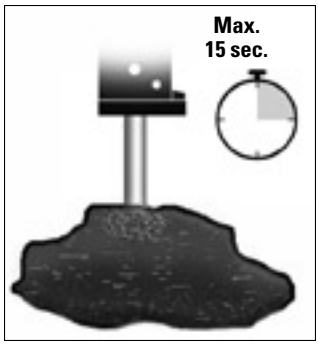
Impact/Secondary Breaking - with blunt tool

- Oversize boulders in quarries
- Hard, brittle and abrasive material



Correct Working Methods

- Keep hammer at 90° angle to working face.
- Apply continuous down pressure on hammer - keep force applied throughout breaking cycle.

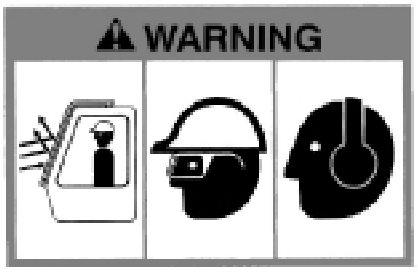


- DO NOT strike in one spot for more than 15 seconds. If object does not break in 15 seconds, REPOSITION the hammer.
- Working too long in one spot creates a dust pocket under the point. Dust reduces impact energy effectiveness and produces heat.
- Excessive heat, produced when the hammer is not properly repositioned, reduces tool and bushing life.

Safety

- Do not operate or perform maintenance on the hammer before reading and understanding the operation & maintenance guide.
- Do not perform any service until having read and understood the service manual.

- Do not use hammers or hammer tools for lifting.
- Chips or splinters of broken material can fly off. Use protective equipment and make sure no one can be injured by flying material when hammer operates.
- Pressurized hydraulic fluid can cause serious injury. Before disconnecting or connecting hydraulic hoses or any hydraulic plugs or couplings, stop the carrier engine and make sure that hydraulic pressure is released.
- Hammer incorporates a pressure accumulator. Release gas pressure from accumulator before disassembling it.



- Head, eye, and hearing protection are strongly recommended.
- Guarding is recommended for the windshield/cab of the base carrier.
- FOPS for the base carrier is recommended for all tunneling or overhead operations.

Small Hammer Tools

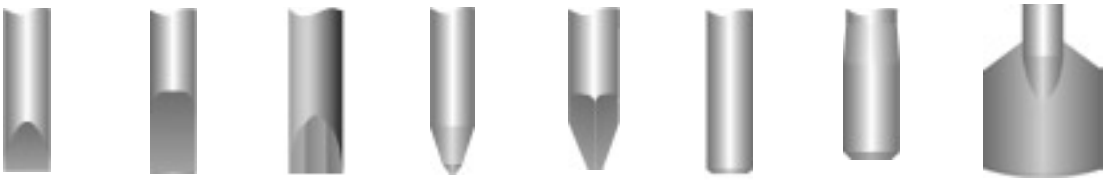
Tool Selection	Chisel	Moil	Blunt	Spade*	Compacting Plate
Symbols for tools:	C	M	B	S	CP
					

					H70	H90C	H100
	H35D S	H45D S	H55D S	H65D S	H70 S	H90C S	H100 S
1. Roadbuilding /construction							
Breaking of road surface	C,M,S	C,M,S	C,M,S	C,M,S	C,M,S	C,M,S	C,M,S
Breaking uneven bedrock to lay a road							C,M
Asphalt cutting	C,S	C,S	C,S	C,S	C,S	C,S	C,S
Trench excavation for drainage					C,M	C,M	C,M
Demolition of bridges	C,M	C,M	C,M	C,M	C,M	C,M	C,M
Compacting soils	CP	CP	CP	CP	CP		
Making holes (for traffic signs, lamp posts)	M	M	M	M	M	M	M
Breaking of frozen ground	C,M,S	C,M,S	C,M,S	C,M,S	C,M,S	C,M,S	C,M,S
2. Demolition/housing development							
Demolition of concrete walls, roofs, floors	C,M	C,M	C,M	C,M	C,M	C,M	C,M
Demolition of light, reinforced concrete (<20")	M	M	M	M	M	M	M
Brick walls	C,M	C,M	C,M	C,M	C,M	C,M	C,M
Rock trenches for mains/water supply/utilities					C,M	C,M	C,M
Rock excavation for foundation						C,M	C,M
Separating rebar from concrete (for recycling)	C,M	C,M	C,M	C,M	C,M	C,M	C,M
3. Quarrying/open cast mining							
Breaking oversizes on a crusher/feeder/feed chute						C,M	C,M
Scaling					C	C	C
5. Metallurgical applications							
Breaking of slag in converter openings							C,M
Breaking of slag in casting ladles						C,M	C,M
Cleaning of castings						C,M	C,M
Breaking of refractory linings in furnaces	C,M	C,M	C,M	C,M	C,M	C,M	C,M

* Spade available as parallel (parallel with the boom) and transverse (perpendicular to the boom).

Large Hammer Tools

Tool Selection	Chisel	Hard Rock Chisel	Soft Rock Chisel	Moil	Pyramidal Tool	Blunt	Super Blunt	Spade*
Symbols for tools:	C	C	C	M	P	B	B	S



1. Roadbuilding/Construction	H115 S	H120C S	H130 S	H140D S	H160D S	H180D S
Breaking of road surface	C,M,P,S	C,M,P	C,M,P	C,M,P	C,M,P	C,M,P
Breaking uneven bedrock to lay a road	C,M,P	C,M,P	C,M,P	C,M,P	C,M,P	C,M,P
Primary breaking to prepare road bed				C,M,P	C,M,P	C,M,P
Trench excavation for drainage	C,M,P	C,M,P	C,M,P	C,M,P	C,M,P	C,M,P
Demolition of bridges	B,C,M,P	B,C,M,P	B,C,M,P	B,C,M,P	B,C,M,P	B,C,M,P
Heavily reinforced bridge pillars				B	B	B
Making holes (for traffic signs, lamp posts)	M	M	M	M	M	M
Breaking of frozen ground	C,M,P,S	C,M,P	C,M,P	C,M,P	C,M,P	C,M,P
2. Demolition/housing development						
Demolition of concrete walls, roofs, floors	B,C,M,P	B,C,M,P	B,C,M,P	B,C,M,P	B,C,M,P	B,C,M,P
Demolition of light, reinforced concrete (<20")	B,M,P	B,M,P	B,M,P			
Brick walls	B,C,M,P	B,C,M,P	B,C,M,P	B,C,M,P	B,C,M,P	B,C,M,P
Rock trenches for mains/water supply/utilities	C,M,P	C,M,P	C,M,P	C,M,P	C,M,P	C,M,P
Rock excavation for foundation	C,M,P	C,M,P	C,M,P	C,M,P	C,M,P	C,M,P
Mass excavation of rock for industrial			C,M,P	C,M,P	C,M,P	C,M,P
building bases						
Massive reinforced concrete foundations				M,P	M,P	M,P
Separating rebar from concrete (for recycling)	B,C,M,P	B,C,M,P	B,C,M,P	B,C,M,P	B,C,M,P	B,C,M,P
3. Quarrying/open cast mining						
Secondary boulder breaking	B	B	B	B	B	B
Primary breaking of rock			C,M,P	C,M,P	C,M,P	C,M,P
Breaking oversizes on a crusher/feeder/feed chute	B,C,M,P	B,C,M,P	B,C,M,P	B,C,M,P	B,C,M,P	
4. Underground applications						
Scaling	C					
5. Metallurgical applications						
Breaking of slag in casting ladles	C,M,P					
Breaking of slag in converter openings	C,M,P	C,M,P	C,M,P	C,M,P		
Cleaning of castings	C,M,P					
Breaking of massive steel slag					C,M,P	C,M,P
Breaking of aluminum electrolyze slag	C,M,P	C,M,P	C,M,P	C,M,P		
6. Other applications						
Demolition/Rock breaking under water	C,M,P	C,M,P	C,M,P	C,M,P	C,M,P	C,M,P

* Spade available as parallel (parallel with the boom) and transverse (perpendicular to the boom).

Small Hammers

H35D S, H45D S, H55D S, H65D S (new D-series)

1. **Integral Mounting (H55D S Pin-On / H65D S Pin-On)** - Optimum compatibility with Cat Mini-Excavators and easily adaptable to mounting on Skid Steer and Multi Terrain Loaders. Compatible with Caterpillar pin grabber quick coupler system.

2. **Flat Top Mounting (H35D S, H45D S, H55D S, H65D S)** - design to accommodate brackets and dedicated quick couplers.

3. **Two Position Ports (H55D S Pin-On / H65D S Pin-On) –** optimized hose routing provides protection from damage on Mini Excavators, Skid Steer and Multi Terrain Loaders (not shown on illustration).

4. **One Piece Body –** reduces components and eliminates tie rods and nuts.

5. **Low Pressure Tubular Accumulator –** assists in the power stroke of the piston.

6. **Distributor –** high oil volume for greater blow frequency.

7. **Pressure Adjusting Valve (PAV) –** assures that all blows are delivered at a constant blow energy.

8. **Piston –** long heavy piston delivers maximum impact energy and minimizes recoil forces to carrier.

9. **Cylinder Sleeve –** provides replaceable and economical protection for the cylinder.

10. **Recoil Isolation –** significantly reduces reflective forces to the carrier structure during hammer operation and improves operator comfort.

11. **Round Tool Retaining Pin –** simple design allows for rapid tool and bushing removal and replacement.

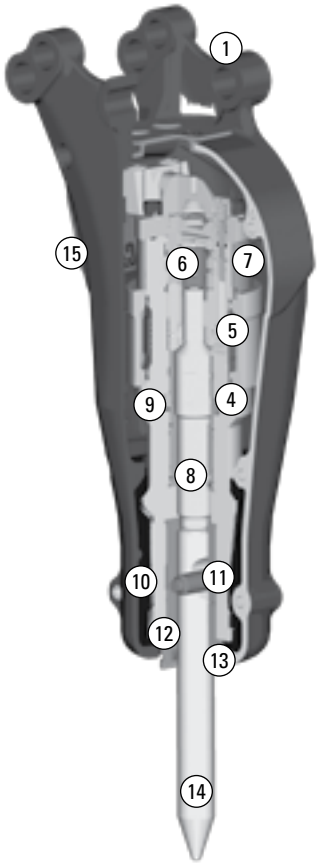
12. **Single Bushing Design –** slip fit field replaceable one piece bushing (includes lower, upper and thrust ring).

13. **Bushing Dust Seal –** prevents contamination of grease and extends life of wear components.

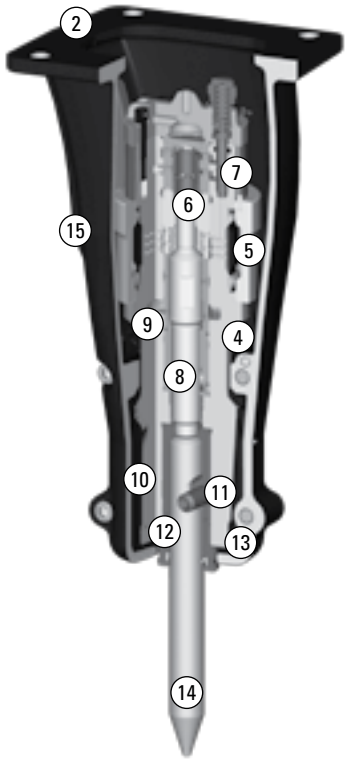
14. **Tool –** heat treated for longer life, ideally matched to piston for optimum transfer of stress waves.

15. **Enclosed Housing with Dampers –** provides protection to the power cell and provides noise reduction.

H55D S, H65D S
Pin-On

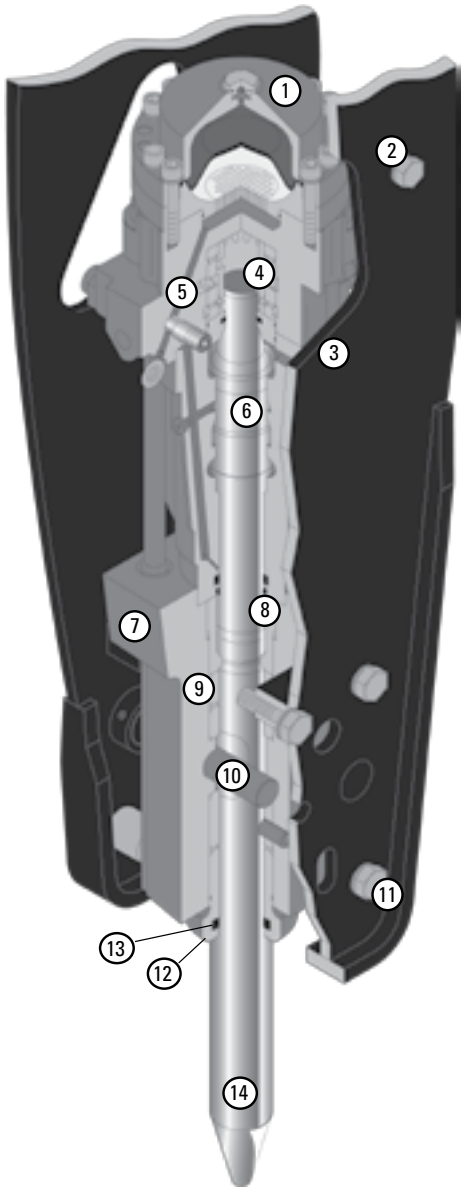


H35D S, H45D S, H55D S, H65D S
Flat Top



Small Hammers

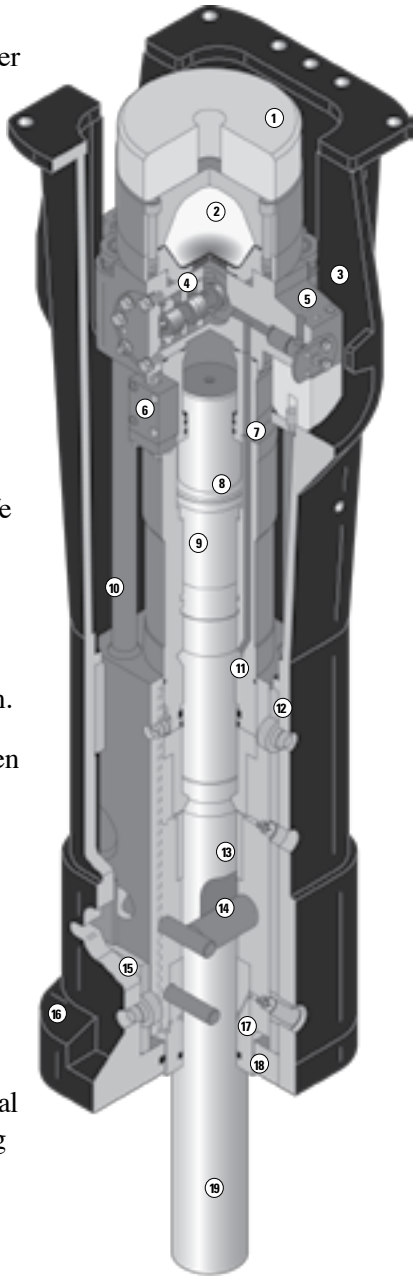
H70 / H70 S, H90C / H90C S, H100 / H100 S



1. **Low Pressure Accumulator** – Assists in the power stroke of the piston.
2. **Custom Sideplates** – Designed for Caterpillar® carrier geometry. Protects the powercell and front end.
3. **High Pressure Accumulator** – Dampens pressure peaks thus protecting the carrier hydraulic system (not shown).
4. **Distributor** – High oil volume for greater blow frequency.
5. **Pressure Adjusting Valve (PAV)** – Assures that all blows are delivered at a constant blow energy.
6. **Piston** – Long heavy piston delivers maximum impact energy and minimizes recoil forces to carrier.
7. **Long Front End** – Ensures proper piston tool alignment.
8. **Slip Fit Thrust Ring** – Dissipates harmful shock loads in abusive applications.
9. **Slip Fit Upper Tool Bushing** – Positive alignment for the tool.
10. **Tool Retention Pin System** – Allows quick and easy removal of tool.
11. **Side Plate Fastener** – Working forces carried through cap screws and front end.
12. **Slip Fit Lower Tool Bushing (Field Replaceable)** – Grease retention grooves for extended lubrication and wear indication.
13. **Dust Seal** – Dust Seal helps prevent foreign material from entering the grease between the lower tool bushing and tool. This reduces the wear on the lower tool bushing and tool.
14. **Tool** – Heat treated for longer life. Ideally matched to piston for greater transfer of stress waves.

Large Hammers

H115 S, H120C S, H130 S, H140D S, H160D S, H180D S



1. **Shock Absorbers –** Provide maximum shock and recoil protection for both hammer and carrier.
2. **Accumulator –** Self-contained diaphragm accumulator designed for long life. The accumulator access is on the side of the hammer. This side access allows for recharging the accumulator while the hammer is mounted on the machine.
3. **Housing –** Symmetrical lean enclosed housing – no parts to break through external shock.
4. **Hydraulic Valves –** The Pressure Control Valve maintains maximum hydraulic pressure to ensure that the hammer delivers all blows at full power. A check valve isolates harmful pulsation spikes from the carrier hydraulic circuit.
5. **Auto-Lube Connection and Grease Channel –** Provides grease to the upper and lower tool bushings to ensure proper greasing. Proper greasing provides longer life for the bushings and the tool.
6. **Auto Shut Off (ASO) –** Prevents blank firing and extends hammer life by reducing internal stress and heat (available on D series models only).
7. **Seal Carrier –** Contains special high performance seals to extend leak-proof operation.
8. **Hydraulic Brake –** Dampens idle strokes and prevents steel to steel contact between piston and cylinder.
9. **Piston –** Long piston transfers a long shock wave into the rock. Tool-piston diameters are matched for maximum energy transfer.
10. **Tie-Rods –** Heat-torqued tie rods ensure maximum clamping force and minimum maintenance.
11. **Cylinder –** Low recoil stress.
12. **Full Length Wear Plates -** Long high abrasion resilient plastic wear plates with visual wear indicators which provide lower bearing pressure between hammer and housing reducing noise and increasing service life (available on D series models only).
13. **Upper Tool Bushing –** Guides the tool to optimize in-line piston to tool contact.
14. **Tool Retaining Pins –** Allow quick and easy tool maintenance.
15. **Upper and Lower Wear Plates –** High abrasion resilient plastic wear plates between hammer and housing reduce noise and guide hammer assembly properly.
16. **Rock Claw –** Special high abrasion resistant rock claw, enables quick positioning of boulders, gives maximum wear life.
17. **Lower Tool Bushing –** Easily replaceable during normal maintenance. Grooves are added on the inside bottom portion of the tool bushing for visual wear limits indicating time to rotate or replace.
18. **Dust Seals –** One Dust Seal helps prevent foreign material from entering the housing. This helps to reduce wear on the front head and wear plates. The second Dust Seal prevents foreign material from entering the grease between the lower tool bushing and the tool. This reduces the wear on the lower tool bushing and tool.
19. **Tool –** Specially heat-treated tools match piston diameter and mass, to deliver full blow energy.

Principles of Selection

Key to the successful sale of a hammer is proper hammer selection.

Background Information

Collection of background information is the first step. The following information will assist in being sure the customer receives the correct hammer and that he has a positive hammer experience. The following issues should be examined...

1. If any, what brand and model hammer was previously used and how did the hammer perform?

2. What % of time will the hammer be used on the machine?

3. Will the hammer be used in primary breaking or secondary breaking?
   (mainly an issue for large hammers)

4. What machine will the hammer be used on and what are the hydraulic flow and pressures of this machine?

5. What is the type of material to be broken and production required from the hammer?
   (best to obtain this from the end user but a table is available on page 26)

Hammer Selection Process

1. Using Cat carrier matching matrices on pages 14-19, identify 2 or 3 possible hammers for your application (for competitive carriers use either competitive matching matrices on pages 20-22 or carrier weight class as reference).

2. Compare machine/carrier flow and pressures to those of the hammer candidates to validate compatibility. Eliminate hammers outside carrier specs.

3. If hammer is to be used in primary breaking consider larger of hammer candidates.

4. Examine production estimates on page 26. Alternatively, check productivity guidance information in Cat Performance Handbook. Identify hammer most compatible with requirements.

5. Determine if the application requires special hammer modifications, i.e. steel mill, underwater, tunnelling, etc..

Other Issues

Once the hammer has been chosen, other elements need to be considered to have a successful hammer experience.

1.Select the correct hammer tool for the application (see chart on page 7 & 8).

2.Check to be sure the correct hammer bracket and hoses are selected (may be difficult on competitive carriers). Refer to hammer specifications pages for reference numbers (pages 27-39).

3.Be sure correct grade of carrier hydraulic oil is specified for hammer use (particularly important in areas of high ambient temperature). Check excavator OMM for further information.

4.Consider supplemental carrier cooling in areas of high ambient temperature.

– Actual operating pressure and back pressure MUST be checked when the hammer is fitted to the carrier (just as important if the hammer goes on a competitive carrier or is installed by the contractor at his shop).

Cat Mini Excavators, Skid Steers, Multi Terrains and Backhoe Loaders

Model		H35D S	H45D S	H55D S (Flat Top)	H55D S (Pin-On)	H65D S (Flat Top)	H65D S (Pin-On)	H70/H70 S	H90C/H90C S	H100/H100 S
Minimum Carrier	**lb**	**2,430**	**3,310**	**5,500**	**5,500**	**9,900**	**6,610**	**11,000**	**15,400**	**17,600**
	kg	1100	1500	2500	2500	4500	3000	5000	7000	8000
Maximum Carrier	**lb**	**5,300**	**7,060**	**13,200**	**11,500**	**19,800**	**14,300**	**17,600**	**26,400**	**30,800**
	kg	2400	3200	6000	5200	9000	6500	8000	12000	14000
301.6C		•	•							
301.8C		•	•							
302.5C			•	• #	•					
303C CR				•	•		• #			
303.5C CR				•	•		•			
304C CR				•	•	•	•			
305C CR				•	•	•	•			
307D						• *		•	•	
308D CR						• *		•	•	
216B					•		•			
226B					•		•			
232B					•		•			
236B					•		•			
242B					•		•			
246C					•		•			
248B					•		•			
252B					•		•			
256C					•		•			
262C					•		•			
268B					•		•			
272C					•		•			
247B					•		•			
257B					•		•			
267B					•		•			
277C					•		•			
279C					•		•			
287C					•		•			
297C					•		•			
416E						• *		•	•	
420E						• *		•	•	
422E						• *		•	•	
428E						• *		•	•	
430E						• *		•	•	
432E						• *		•	•	
434E						• *		•	•	
442E						• *		•	•	
444E						• *		•	•	
446D									•	•

Installation of add-on optional, counterweight to machine is required.

* The Hydraulic Flow and Pressures must be checked to verify they match the requirements for the hammer being mounted to any of the above excavators.

Note 1 - Caterpillar recommends the use of a suitable shield/guard system to insure operator has adequate protection from flying debris.

Note 2 - These matches are for general reference purposes for Cat machines only. When special boom and quick coupler arrangements are in use, these matches may not apply.

Note 3 - When matching hammers to competitive carriers, selection should be made by carrier weight. Refer to the carrier range at the top of the table in order to determine the correct match.

Cat Small, Medium, Large Track, and Wheeled Excavators

Model		H65D S (Flat Top)	H70/H70 S	H90C/H90C S	H100/H100 S	H115 S	H120C S	H130 S	H140D S	H160D S	H180D S
Minimum Carrier	**lb**	**9,900**	**11,000**	**15,400**	**17,600**	**26,400**	**37,400**	**41,800**	**55,000**	**70,400**	**88,000**
	kg	4500	5000	7000	8000	12000	17000	19000	25000	32000	40000
Maximum Carrier	**lb**	**19,800**	**17,600**	**26,400**	**30,800**	**44,000**	**57,200**	**70,400**	**88,000**	**121,000**	**165,000**
	kg	9000	8000	12000	14000	20000	26000	32000	40000	55000	75000
311D				•	•						
312D				•	•	•					
314D CR					•	•					
315D					•	•	•				
319D						•	•	•			
320D						•	•	•			
M313D					•	•					
M315D					•	•	•				
M316D					•	•	•				
M318D						•	•	•			
M322D						•	•	•			
321D CR							•	•			
323D							•	•	•		
324D							•	•	•		
328D CR								•	•		
329D							•	•	•		
336D								•	•	•	
345D										•	•
365C											•

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Note 3 - When matching hammers to competitive carriers, selection should be made by carrier weight. Refer to the carrier range at the top of the table in order to determine the correct match

Cat Non-Current Carriers

Model		H35D S	H45D S	H55D S (Flat Top)	H55D S (Pin-On)	H65D S (Flat Top)	H65D S (Pin-On)	H70/H70 S	H90C/H90C S	H100/H100 S
Minimum Carrier	**lb**	**2,430**	**3,310**	**5,500**	**5,500**	**9,900**	**6,610**	**11,000**	**15,400**	**17,600**
	kg	1100	1500	2500	2500	4500	3000	5000	7000	8000
Maximum Carrier	**lb**	**5,300**	**7,060**	**13,200**	**11,500**	**19,800**	**14,300**	**17,600**	**26,400**	**30,800**
	kg	2400	3200	6000	5200	9000	6500	8000	12000	14000
301.5		•	•							
301.6		•	•							
301.8		•	•							
302.5			•	• #	•					
303 CR				•	•		• #			
303.5				•	•		•			
304CR				•	•	•	•			
304.5				•	•	•	•			
305CR				•	•	•	•			
307						• *		•	•	
307B						• *		•	•	
307B SB						• *		•	•	
307C						• *		•	•	
308B CR						• *		•	•	
308C CR						• *		•	•	
311C									•	•
312C									•	•
216					•		•			
226					•		•			
228					•		•			
232					•		•			
236					•		•			
242					•		•			
246					•		•			
246B					•		•			
247					•		•			
248					•		•			
252					•		•			
257					•		•			
262					•		•			
262B					•		•			
267					•		•			
268					•		•			
271					•		•			
416						•		•	•	
416 Series II						•		•	•	
416B						•		•	•	
416C						•		•	•	

Installation of add-on optional, counterweight to machine is required.

* The Hydraulic Flow and Pressures must be checked to verify they match the requirements for the hammer being mounted to any of the above excavators.

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Note 2 - These matches are for general reference purposes for Cat machines only. When special boom and quick coupler arrangements are in use, these matches may not apply.

Note 3 - When matching hammers to competitive carriers, selection should be made by carrier weight. Refer to the carrier range at the top of the table in order to determine the correct match

Cat Non-Current Carriers

Model		H35D S	H45D S	H55D S (Flat Top)	H55D S (Pin-On)	H65D S (Flat Top)	H65D S (Pin-On)	H70/H70 S	H90C/H90C S	H100/H100 S
Minimum Carrier	**lb**	**2,430**	**3,310**	**5,500**	**5,500**	**9,900**	**6,610**	**11,000**	**15,400**	**17,600**
	kg	1100	1500	2500	2500	4500	3000	5000	7000	8000
Maximum Carrier	**lb**	**5,300**	**7,060**	**13,200**	**11,500**	**19,800**	**14,300**	**17,600**	**26,400**	**30,800**
	kg	2400	3200	6000	5200	9000	6500	8000	12000	14000
416C (IT)						•		•	•	
416D						•		•	•	
420D						•		•	•	
420D (IT)						•		•	•	
424D						•		•	•	
426						•		•	•	
426 Series II						•		•	•	
426B						•		•	•	
426C						•		•	•	
426C (IT)						•		•	•	
(AWS) 426C						•		•	•	
(AWS) 426C (IT)						•		•	•	
428						•		•	•	
428 Series II						•		•	•	
428B						•		•	•	
428C						•		•	•	
428C (IT)						•		•	•	
428D						•		•	•	
430D						•		•	•	
430D (IT)						•		•	•	
432D						•		•	•	
436						•		•	•	
436 Series II						•		•	•	
436B						•		•	•	
436C						•		•	•	
436C (IT)						•		•	•	
(AWS) 436C						•		•	•	
(AWS) 436C (IT)						•		•	•	
438						•		•	•	
438 Series II						•		•	•	
438B						•		•	•	
438C						•		•	•	
438C (IT)						•		•	•	
(AWS) 438C						•		•	•	
(AWS) 438C (IT)						•		•	•	
442D						•		•	•	
446									•	
446B									•	•

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Cat Non-Current Carriers

Model		H70/H70 S	H90C/H90C S	H100/H100 S	H115 S	H120C S	H130 S	H140D S	H160D S	H180D S
Minimum Carrier	**lb**	**11,000**	**15,400**	**17,600**	**26,400**	**37,400**	**41,800**	**55,000**	**70,400**	**88,000**
	kg	5000	7000	8000	12000	17000	19000	25000	32000	40000
Maximum Carrier	**lb**	**17,600**	**26,400**	**30,800**	**44,000**	**57,200**	**70,400**	**88,000**	**121,000**	**165,000**
	kg	8000	12000	14000	20000	26000	32000	40000	55000	75000
205 LC			•	•						
205B			•	•						
211 LC				•	•					
213 LC					•	•				
215					•	•	•			
215 SA					•	•	•			
215B LC					•	•	•			
215C LC					•	•	•			
215D LC					•	•	•			
219						•	•			
219D						•	•			
219 LC						•	•			
219D LC						•	•			
225 LC							•	•		
225 SA							•	•		
225B							•	•		
225D							•	•		
225B LC							•	•		
225D LC							•	•		
229							•	•		
229 LC Custom 180							•	•		
229D							•	•		
231D								•	•	
231D LC								•	•	
235									•	•
235B									•	•
235C									•	•
235D									•	•
235D LC									•	•
245										•
245B										•
245D										•
E70		•	•							
E70B		•	•							
E110				•	•					
E110B				•	•					
E120				•	•					
E120B				•	•					
E140					•	•				
E200B					•	•	•			
EL200B					•	•	•			
E240						•	•			
E240B						•	•			
E240C						•	•			
EL240						•	•			
EL240B						•	•			
EL240C						•	•			
E300								•		
E300B								•		
EL300								•		
EL300B								•		
E450									•	•
E650										•
311			•	•						
311B			•	•						
311C			•	•						
312			•	•	•					
312B			•	•	•					
312B L			•	•	•					
312C			•	•	•					
312C L			•	•	•					
313B CR			•	•	•					
314C CR				•	•					
314C LCR				•	•					

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Cat Non-Current Carriers

Model		H70/H70 S	H90C/H90C S	H100/H100 S	H115 S	H120C S	H130 S	H140D S	H160D S	H180D S
Minimum Carrier	**lb**	**11,000**	**15,400**	**17,600**	**26,400**	**37,400**	**41,800**	**55,000**	**70,400**	**88,000**
	kg	5000	7000	8000	12000	17000	19000	25000	32000	40000
Maximum Carrier	**lb**	**17,600**	**26,400**	**30,800**	**44,000**	**57,200**	**70,400**	**88,000**	**121,000**	**165,000**
	kg	8000	12000	14000	20000	26000	32000	40000	55000	75000
315				•	•	•				
315 L				•	•	•				
315B				•	•	•				
315B L				•	•	•				
315C				•	•	•				
315C L				•	•	•				
317					•	•				
317B L					•	•				
317 N					•	•				
317B LN					•	•				
318B L					•	•				
318B LN					•	•				
318C					•	•				
318C L					•	•				
318C N					•	•				
319C LN					•	•	•			
320					•	•	•			
320C					•	•	•			
320 L					•	•	•			
320 N					•	•	•			
320 S					•	•	•			
320 B					•	•	•			
320B L					•	•	•			
320B N					•	•	•			
320B LN					•	•	•			
321B CR						•	•			
321B LCR						•	•			
321C CR						•	•			
322						•	•			
322B						•	•			
322 L						•	•			
322B L						•	•			
322C L						•	•			
325						•	•	•		
325 L						•	•	•		
325B L						•	•	•		
325B LN						•	•	•		
325C L						•	•	•		
325C CR						•	•	•		
330							•	•	•	
330 L							•	•	•	
330B L							•	•	•	
330B LN							•	•	•	
330C							•	•	•	
330C L							•	•	•	
345B									•	•
345B L									•	•
345B L Series II									•	•
345C									•	•
350									•	•
350 L									•	•
365B 365B II										•
365B L										•
365B L Series II										•
M312				•	•					
M313C				•	•	•				
M315				•	•	•				
M315C				•	•	•				
M316C				•	•	•				
M318					•	•	•			
M318C					•	•	•			
M320					•	•	•			
M322C						•	•	•		

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Note 3 - When matching hammers to competitive carriers, selection should be made by carrier weight. Refer to the carrier range at the top of the table in order to determine the correct match.

Competitive Excavators

All competitive matching matrices are based on machine specifications provided by the manufacturer only. No testing has been done to verify this matching information is correct. The dealer is responsible for ensuring the hammer chosen is in accordance with the machine lifting capacities, hydraulic flow and pressure ranges, as well as bracket geometry provided by the manufacturer.

Competitive Make	Model	H65D S FT	H70 (S)	H90C (S)	H100 (S)	H115 S	H120C S	H130 S	H140D S	H160D S	H180D S
CASE	CX 75 SR	●	●	●							
	CX 80	●	●	●							
	CX 135 SR				●	●					
	CX 130 B				●	●					
	CX 160 B					●	●				
	CX 210 B						●	●			
	CX 225 SR						●	●			
	CX 240 B						●	●	●		
	CX 290 B							●	●		
	CX 330								●	●	
	CX 460									●	●
	CX 700										●
DEERE	75D	●	●	●							
	85D			●	●						
	120C				●	●					
	135C RTS				●	●					
	160D LC					●	●				
	200D LC						●	●			
	225D LC						●	●			
	240D LC						●	●	●		
	270D LC							●	●		
	350D LC								●	●	
	450D LC									●	●
	650D LC										●
DOOSAN	DX180LC					●	●				
	DX225LC						●	●			
	DX255LC						●	●			
	DX300							●	●		
	DX340								●	●	
	DX420									●	●
	DX480									●	●
HITACHI	Zaxis 75 US-3	●	●	●							
	Zaxis 85 US-4			●	●						
	Zaxis 120				●	●					
	Zaxis 135 US				●	●					
	Zaxis 160DLC-3					●	●				
	Zaxis 200DLC-3						●	●			
	Zaxis 225D USLC-3						●	●			
	Zaxis 240LC-3						●	●	●		
	Zaxis 270LC-3							●	●		
	Zaxis 350DLC-3								●	●	
	Zaxis 450DLC-3									●	●
	Zaxis 650DLC-3										●
JCB	JS140					●					
	JS145					●					
	JS160NLC					●	●				
	JS220						●	●			
	JS220LR						●	●			
	JS220XD						●	●			
	JS260							●	●		
	JS260LR							●	●		
	JS260XD							●	●		
	JS330								●	●	
	JS330XD								●	●	
	JS460									●	●
KOBELCO	70SR	●	●	●							
	80CS	●	●	●							
	SK170LC					●	●				
	SK210LC						●	●			
	215SR						●	●			
	235SR						●	●	●		
	SK260LC							●	●		
	SK295LC							●	●		
	SK350LC								●	●	
	SK485LC									●	●

Competitive Make	Model	H65D S FT	H70 (S)	H90C (S)	H100 (S)	H115 S	H120C S	H130 S	H140D S	H160D S	H180D S
KOMATSU	PC78US-6	●	●	●							
	PC78MR-6	●	●	●	●						
	PC138USLC-8					●					
	PC160LC-7					●	●				
	PC200-8					●	●	●			
	PC200LC-8						●	●			
	PC220LC-8						●	●			
	PC270LC-8							●	●		
	PC308USLC-3								●	●	
	PC300LC-8								●	●	
	PC300HD-8								●	●	
	PC400LC-8									●	●
	PC600LC-8										●
LINK-BELT	130 X2				●	●					
	160 X2					●	●				
	210 X2						●	●			
	240 X2						●	●			
	290 X2							●	●		
	350 X2								●	●	
	460 X2									●	●
	700 X2										●
NEW HOLLAND	E70	●	●	●							
	E80	●	●	●							
	E130					●					
	E160					●					
	E175B					●	●				
	E215						●	●			
	E215B						●	●			
TAKEUCHI	TB175	●	●	●							
	TB180FR			●	●						
	TB1140					●					
TEREX	TC125				●	●					
	1604 LC						●	●			
	1605 LC					●	●				
	1704 LC						●	●			
	1804 LC							●	●		
	TXC 140LC-2					●					
	TXC 175LC-2					●	●				
	TXC 180LC-2					●	●				
	TXC 225LC-2						●	●			
	TXC 255LC-2						●	●	●		
	TXC 300LC-2							●	●		
	TXC 340LC-2								●	●	
	TXC 420LC-2									●	●
	TXC 470LC-1									●	●
	TXC 480LC-2									●	●
VOLVO	EC140B					●					
	EC140C					●					
	EC145C					●					
	EC160C					●	●				
	EC210C						●	●			
	EC235C						●	●			
	EC240C							●	●		
	EC290C							●	●		
	EC330B								●	●	
	EC330C								●	●	
	EC360C								●	●	
	EC460C									●	●
	EC700B										●
	EC700C										●

Competitive Mini Excavators

Competitive Make	Model	H35D S	H45D S	H55D S	H65D S
BOBCAT	418	●			
	323	●	●		
	425		●	●	
	325		●	●	●
	329			●	●
	331			●	●
	430			●	●
	335			●	●
	435			●	●
	337			●	●
	442				●
CASE	CX17B	●			
	CX27B		●		
	CX31B			●	●
	CX36B			●	●
	CX50B			●	●
DEERE	17D	●	●		
	27D ZTS		●	●	●
	35D			●	●
	50D			●	●
HITACHI	Zaxius 17U-2	●	●		
	Zaxius 27U-2		●	●	●
	Zaxius 35U-2			●	●
	Zaxius 50U-2			●	●
JCB	8018	●	●		
	8025			●	●
	8030 ZTS			●	●
	3035 ZTS			●	●
	8040				●
	8045 ZTS				●
	8052				●
	8060				●
KOBELCO	13SR	●			
	27SR-3		●		
	30SR-3			●	●
	35SR-3			●	●
	50SR-3			●	●
KOMATSU	PC18 MR-2	●	●		
	PC20MR-2	●	●		
	PC27MR-2		●	●	●
	PC35MR-2			●	●
	PC40MR-2			●	●
	PC50MR-2			●	●
	PC58UU-3			●	●

Competitive Make	Model	H35D S	H45D S	H55D S	H65D S
KUBOTA	U15	●	●		
	KX41-3	●	●		
	U25		●	●	●
	KX71-3		●	●	●
	KX91-3			●	●
	U35			●	●
	KX121-3S			●	●
	KX161-3			●	●
	U45			●	●
	KX161-3S			●	●
	KX080-3				●
NEW HOLLAND	E15	●			
	E18B		●		
	E27		●		
	E30			●	●
	E35			●	●
	E50			●	●
TAKEUCHI	TB016	●	●		
	TB125		●	●	●
	TB135			●	●
	TB145			●	●
	TB138FR			●	●
	TB153FR			●	●
TEREX	TC16	●			
	TC20	●	●		
	TC29		●		
	TC35			●	●
	TC37			●	●
	TC48			●	●
	TC50			●	●
	TC60			●	●
	TC75				●
VOLVO	EC15B	●	●		
	EC20B		●		
	EC25		●	●	●
	EC30		●	●	●
	ECR28		●	●	●
	ECR38			●	●
	ECR58			●	●
	ECR88				●
YANMAR	VIO17	●	●		
	VIO20-3		●		
	VIO27-3		●	●	●
	VIO35-3			●	●
	VIO45-5			●	●
	VIO55-5			●	●

Competitive Backhoe Loaders

Competitive Make	Model	H65D S FT	H70 (S)	H90C (S)	H100 (S)
CASE	580M Series 3	●	●	●	
	580 Super M Series 3	●	●	●	
	580 Super M+ Series 3	●	●	●	
	590 Super M Series 3			●	●
	590 Super M+ Series 3			●	●
DEERE	310J	●	●	●	
	310SJ		●	●	
	310SJ TMC		●	●	
	410J		●	●	
	410J TMC		●	●	
	710J			●	●
JCB	2CX	●	●		
	3CX	●	●	●	
	4CX	●	●	●	
KOMATSU	WB142-5	●	●		
	WB146-5	●	●	●	

Competitive Make	Model	H65D S FT	H70 (S)	H90C (S)	H100 (S)
KOMATSU	WB146PS-5	●	●	●	
	WB156-5		●	●	
	WB156-5PS-5		●	●	
NEW HOLLAND	B90B	●	●		
	B95	●	●		
	B95B	●	●		
	B95TC	●	●	●	
	B95LR	●	●		
	B95B LR	●	●		
	B110	●	●		
	B110B	●	●		
	B115	●	●	●	
	B115B	●	●	●	
VOLVO	BL60	●	●	●	
	BL70			●	●

Competitive Skid Steer & Multi Terrain Loaders

Competitive Make	Model	H55D S PO	H65D S PO
BOBCAT	S130		
	S150	•	•
	S160	•	•
	S175	•	•
	S185	•	•
	S205	•	•
	S220	•	•
	S250	•	•
	S300	•	•
	S330	•	•
CASE	410 Series 3	•	•
	420 Series 3	•	•
	430 Series 3	•	•
	435 Series 3	•	•
	440 Series 3	•	•
	445 Series 3	•	•
	450 Series 3	•	•
	465 Series 3	•	•
DEERE	313		
	315		
	317	•	•
	320	•	•
	325	•	•
	328	•	•
	332	•	•
GEHL	3640E		
	4240E	•	•
	4640E	•	•
	5240E	•	•
	5640E	•	•
GEHL	6640E	•	•
	7810E		•
JCB	160 Series 2	•	•
	170 Series 2	•	•
	180 Series 2	•	•
	190 Series 2	•	•
	1110 Series 2	•	•
KOMATSU	SK 815-5	•	•
	SK 820-5	•	•
	SK 1020-5	•	•
	SK 1026-5	•	•
NEW HOLLAND	L150		
	L160	•	•
	L170	•	•
	L175	•	•
	L180	•	•
	L185	•	•
	L190	•	•
THOMAS	85		
	105		
	153	•	•
	165	•	•
	175	•	•
	250	•	•
	255	•	•
VOLVO	MC60B	•	•
	MC70B	•	•
	MC80B	•	•
	MC90B	•	•
	MC110B	•	•

Competitive Make	Model	H35D S	H45D S	H55D S	H65D S	H70 S	H90C S	H100 S	H115 S	H120C S	H130 S	H140D S	H160D S	H180D S
Allied AR Series	AAR70C			•										
	AR75B				•	•								
	AR85						•							
	AR95							•						
	AR110B								•					
	AR130B									•	•			
	AR140B											•		
	AR160B												•	
Allied IN Series	BR108 / In8	•												
	BR211 / In11	•												
	BR315 / In15		•											
	BR522 / In22			•										
Allied M Series	BR2214 / M14										•			
	BR2518 / M18											•		
Allied Rammer Series	BR321 / S21/City	•												
	BR422 / S22/City		•											
	BR623 / S23N/City			•										
	BR825 / S25N/City				•	•								
	BR927 / S27/City						•							
	BR1229 / S29/City							•						
	BR2064 / E64/City								•					
	BR2266 / E66/City									•				
	BR2568 / E68/City										•			
	BR3088 / G88 City											•		
	BR3890 / G90 City Pro												•	
	BR4511 / G110 City Pro													•
	BR7013 / G130 City													
Atlas Copco	SB 55													
	SB 102	•												
	SB 152	•												
	SB 202		•											
	SB 200			•										
	SB 300				•									
	SB 300S				•									
	SB 450					•								
	SB 450S					•								
	SB 552					•								
	PB 110	•												
	PB 160	•	•											
	PB 210			•										
	PB 310				•									
	PB 420				•	•								
	PB 530					•								
	MB 500						•							
	MB 700							•						
	MB 1000								•					
	MB 1200									•				
	MB 1500										•			
	MB 1700										•			
	HB 2200											•		
	HB 2500											•		
	HB 3000												•	
	HB 4200													•
	HB 5800													•
	HB 7000													
Bobcat	HB280													
	HB680	•												
	HB880		•											
	HB980			•										
	HB1180				•									
	HB2380					•								
BTI BT Series (Daemo)	BT550			•										
	BT750				•									
	BT1000					•								
	BT1400						•							
	BT2000							•	•					
	BT3500									•				
	BT4000										•			
	BT5000											•		
	BT8000												•	
	BT10000													•
BTI TB Series (Toku)	TB135ME		•											
	TB425ME			•										
	TB285QA				•									
	TB335X					•								
	TB425XC						•							
	TB625XC							•						
	TB725XC								•					
	TB830XC									•				
	TB980XC										•			
	TB1280XC											•		
	TB1680XC												•	
	TB2080XC													•
	TB2580XC													
Chicargo Pneumatic	CP 100	•												
	CP 150		•											
	CP 200			•										
	CP 300				•									
	CP 400				•	•								
	CP 550						•							
	CP 750							•						
	CP 1150								•					
	CP 1650									•	•			
	CP 2250											•		

Matching Guide – Competitive Hammers

Competitive Make	Model	H35D S	H45D S	H55D S	H65D S	H70 S	H90C S	H100 S	H115 S	H120C S	H130 S	H140D S	H160D S	H180D S
Chicargo Pneumatic	CP 3050												•	
	CP 4250													•
Deere / IPC	HH15	•												
	HH30		•											
	HH50			•										
	HB60				•									
	HH75					•								
	HB85					•								
	HH100						•							
Furukawa	F3	•												
	F4	•	•											
	F5			•										
	F6				•	•								
	F9					•	•							
	F12							•						
	F19								•	•				
	F20									•				
	F22									•				
	F27										•			
	F30										•	•		
	F35										•	•		
	F45												•	
	F70													•
Indeco HP Breaker	HP 200	•												
	HP 350		•											
	HP 500			•										
	HP 750				•									
	HP 1000					•								
	HP 1100					•	•							
	HP 1250						•							
	HP 1500							•						
	HP 1800							•						
	HP 2000								•					
	HP 3000									•				
	HP 4000										•			
	HP 5000											•		
	HP 7500												•	
	HP 8000												•	
	HP 10000													•
	HP 12000													
	HP 16000													
Indeco MES Breaker	MES-150SP	•												
	MES-200SP	•	•											
	MES-351SP			•										
	MES-553SP				•									
	MES-650SP					•								
	MES-1000HD					•								
	MES-1250HD						•							
	MES-1500HD							•						
	MES-1750HD							•						
	MES-2000HD								•					
	MES-2500HD									•				
	MES-3000HD										•			
	MES-3500HD										•	•		
	MES-4000HD											•		
	MES-5000HD											•	•	
	MES-7000HD												•	•
	MES-8500HD													•
	MES-12000HD													
IPC Industries Husky Hammer	HH100	•												
	HH150-2	•												
	HH300-2		•											
	HH500-2			•										
	HH750-2				•	•								
	HH1000-2						•							
	HH2000							•	•					
	HH3600									•				
	HH4500										•	•		
	HH5800											•		
	HH8000												•	
JCB	HM 100Q	•												
	HM 165Q	•	•											
	HM 265Q			•										
	HM 385Q				•									
	HM 495Q					•								
	HM 860Q							•						
	HM 1260Q								•	•				
	HM 1560Q										•			
	HM 1760Q										•			
	HM 2460Q											•		
	HM 3060Q												•	
	HM 4160Q													•
Kent	KF 1	•												
	KF 2	•												
	KF 3		•											
	KF 4			•										
	KF 5				•									
	KF 6					•								
	KF 9						•							
	KF 12 Qt							•	•					
	KF19 Qt									•				
	KF 22 Qt										•			
	KF 27 Qt										•			
	KF 35 Qt											•		
	KF 45Qt												•	
	KF 70 Qt													•

Competitive Make	Model	H35D S	H45D S	H55D S	H65D S	H70 S	H90C S	H100 S	H115 S	H120C S	H130 S	H140D S	H160D S	H180D S
Kubota	KXB300N													
	KXB400N	•												
	KXB450F		•											
	KXB500F			•										
	KXB600F				•	•								
	KXB800F						•							
Montabert	SC6	•												
	SC8	•												
	SC12		•											
	SC16		•											
	SC22			•										
	SC28				•									
	SC36					•								
	140					•								
	150						•							
	300							•						
	700								•					
	900									•				
	V1200										•			
	V32										•	•		
	V1600											•	•	
	V45 SHD											•	•	
	V55 SHD													•
	V65 SHD													
New Holland / IPC	HH155	•												
	HH305		•											
	HH505			•										
	HH755				•	•								
	HH1005						•							
NPK	GH06	•												
	GH07	•												
	GH1		•											
	GH2			•										
	GH3				•									
	GH4					•	•							
	GH6							•						
	E-208								•					
	GH9									•				
	GH10										•			
	GH12											•		
	GH15												•	
	GH18													•
	GH30													
Okada	OKB300	•												
	TOP25		•											
	TOP30		•											
	TOP35			•										
	TOP45B				•									
	OKB304B					•								
	TOP60B						•							
	TOP90							•						
	TOP100A								•					
	TOP200									•				
	TOP205										•			
	TOP210										•			
	OKB316											•		
	OKB318												•	
	TOP300												•	
	TOP400													•
	OKB330													
Stanley	MB156	•												
	MB256		•											
	MB356			•										
	MB556				•	•								
	MB656					•								
	MB10						•							
	MB15EXS						•							
	MB20EXS							•						
	MB30EXS								•					
	MB40EXS									•				
	MB50EXS										•			
	MB60EXS											•		
	MB70EXS												•	
	MB80EXS												•	
	MB100EXS													•
Tramac	SC-8	•												
	SC-12		•											
	SC-16		•											
	SC-22			•										
	SC-28				•									
	SC-36					•								
	SC-42													
	SC-50							•						
	140					•								
	150						•							
	700								•					
	900									•				
	V1200										•			
	V32										•	•		
	V1600											•	•	
	V1800											•	•	
	V2500											•	•	
	V46 SHD											•	•	
	V56 SHD											•	•	
	V65 SHD													•

Hammer Productivity Rates

Hammer Models	Non-Reinforced Concrete	Reinforced Concrete	Sedimentary Rock	Volcanic Rock
H35D S	8-16 yd^3 6-12 m^3			
H45D S	10-23 yd^3 8-18 m^3			
H55D S	18-30 yd^3 14-23 m^3			
H65D S	45-90 yd^3 34-69 m^3			
H70/H70 S	85-140 yd^3 65-107 m^3	25-60 yd^3 19-46 m^3		
H90C/H90C S	90-160 yd^3 69-122 m^3	50-80 yd^3 38-61 m^3		
H100/H100 S	125-280 yd^3 96-214 m^3	130-175 yd^3 99-134 m^3	110-250 yd^3 84-191 m^3	55-130 yd^3 42-99 m^3
H115 S	150-375 yd^3 115-287 m^3	140-240 yd^3 107-184 m^3	165-300 yd^3 126-229 m^3	75-150 yd^3 57-115 m^3
H120C S	200-450 yd^3 153-344 m^3	160-300 yd^3 122-229 m^3	200-340 yd^3 153-260 m^3	110-200 yd^3 84-153 m^3
H130 S	275-490 yd^3 210-375 m^3	200-350 yd^3 153-268 m^3	250-400 yd^3 191-306 m^3	135-275 yd^3 103-210 m^3
H140D S		250-650 yd^3 191-497 m^3	300-700 yd^3 229-535 m^3	150-350 yd^3 115-268 m^3
H160D S		300-850 yd^3 229-650 m^3	350-900 yd^3 268-688 m^3	200-600 yd^3 153-459 m^3
H180D S		385-1705 yd^3 295-1301 m^3	440-1760 yd^3 337-1345 m^3	275-990 yd^3 210-757 m^3

Production rates listed are based on 8-hr shift

The above figures are for general estimation purpose only and must not be used to guarantee any production figure to the customer. The actual working results may vary according to the quality and structure of the material to be broken, required degree of material size reduction, installation, condition of the carrier, conditions at the worksite, haulage of the broken material, skills of the operator etc..

Product Specifications	Energy Class	BPM	Rated Flow	Op Weight*	Op Pressure	Carrier Wt Range	Sound Power Level Lwa**
	150 ft-lb 203 J	800-2900	3-9 gpm 12-35 lpm	227 lbs 103 kg	2393 psi 16 500kPa	2430-5300 lb 1.1-2.4 t	121 dB(A)

* Operating weight includes hammer, standard tool and average mounting bracket.
** Sound power level Lwa as tested per Directive 2000/14/EC.

Territory	Model	Part Number	Description
NACD LACD APD	H35D S	304-3075	Silenced & Flat Top configuration is standard. A mounting bracket is required to install this hammer onto a Caterpillar or competitive carrier.
EAME	H35D S	254-7636	Silenced & Flat Top configuration is standard. A mounting bracket is required to install this hammer onto a Caterpillar or competitive carrier. **Comes standard in solid wooden box with 2 tools included (1 Moil and 1 Chisel).**

Installation Hardware requirements:

	H35D S		
Host Machine	**Mounting Bracket**	**Connecting Hoses (Note 1)**	**Field Installed Hydraulic Kit**
301.6C	290-0333	290-3181	Not required with factory circuit
301.8C			
Competitive MHE	Consult Cat Work Tools	Dealer made	

Note 1 - Connecting hoses include all parts required to connect the hammer to the factory stick lines
Hose couplings on the hammer end are high vibration coupling (HVC).

Standard Tools:

	Part Number	Stamp ID	Total Length		Working Length		Dia Top		Dia Bottom		Weight	
			in	mm	in	mm	in	mm	in	mm	lbs	kg
Chisel	263-4729	157268	14.96	380	8.7	221	1.57	40	1.57	40	7.7	3.5
Moil	263-4730	155521	14.96	380	8.7	221	1.57	40	1.57	40	7.7	3.4

Other Tools: Available from parts only.

	Part Number	Stamp ID	Total Length		Working Length		Dia Top		Dia Bottom		Weight	
			in	mm	in	mm	in	mm	in	mm	lbs	kg
Spade, Parallel	263-4732	263-4732	14.96	380	8.7	221	1.57	40	3.94	100	7.7	3.5
Spade, Transverse	263-4733	263-4733	14.96	380	8.7	221	1.57	40	3.94	100	7.7	3.5
Compacting Plate	263-4731	157907	15.35	390	9.09	231	1.57	40	6.3	160	18.7	8.5

Other Equipment:

When installing a hammer onto a carrier it is recommended that cab frontal protection be installed.
If hammer is to be used for overhead demolition cab frontal and overhead protection is recommended.

H45D S

Product Specifications	Energy Class	BPM	Rated Flow	Op Weight*	Op Pressure	Carrier Wt Range	Sound Power Level Lwa**
	300 ft-lb 407 J	900-2500	7-15 gpm 25-55 lpm	320 lbs 145 kg	2393 psi 16 500 kPa	3310-7060 lb 1.5-3.2 t	119 dB(A)

* Operating weight includes hammer, standard tool and average mounting bracket.
** Sound power level Lwa as tested per Directive 2000/14/EC.

Territory	Model	Part Number	Description
NACD LACD APD	H45D S	274-1620	Silenced & Flat Top configuration is standard. A mounting bracket is required to install this hammer onto a Caterpillar or competitive carrier.
EAME	H45D S	297-9362	Silenced & Flat Top configuration is standard. A mounting bracket is required to install this hammer onto a Caterpillar or competitive carrier. **Comes standard in solid wooden box with 2 tools included (1 Moil and 1 Chisel).**

Installation Hardware requirements:

	H45D S		
Host Machine	**Mounting Bracket**	**Connecting Hoses (Note 1)**	**Field Installed Hydraulic Kit**
301.6C	290-0333	290-3181	Not required with factory circuit
301.8C			
302.5C	290-7023	292-0231	
Competitive MHE	Consult Cat Work Tools	Dealer made	

Note 1 - Connecting hoses include all parts required to connect the hammer to the factory stick lines
Hose couplings on the hammer end are high vibration coupling (HVC).

Standard Tools:

	Part Number	Stamp ID	Total Length		Working Length		Dia Top		Dia Bottom		Weight	
			in	mm	in	mm	in	mm	in	mm	lbs	kg
Chisel	274-3844	158614	17.72	450.00	9.17	233.00	1.89	48.00	1.89	48.00	12.98	5.90
Moil	274-3845	157299	17.72	450.00	9.17	233.00	1.89	48.00	1.89	48.00	12.76	5.80

Other Tools: Available from parts only.

	Part Number	Stamp ID	Total Length		Working Length		Dia Top		Dia Bottom		Weight	
			in	mm	in	mm	in	mm	in	mm	lbs	kg
Spade, Parallel	274-3847	274-3847	17.72	450.00	9.17	233.00	1.89	48.00	0.59	15.00	12.98	5.90
Spade, Transverse	274-3848	274-3848	17.72	450.00	9.17	233.00	1.89	48.00	4.53	115.00	12.98	5.90
Compacting Plate	274-3846	157980	16.02	407.00	7.48	190.00	1.89	48.00	6.30	160.00	21.78	9.90

When installing a hammer onto a carrier it is recommended that cab frontal protection be installed. If hammer is to be used for overhead demolition cab frontal and overhead protection is recommended.

Product Specifications	Energy Class	BPM	Rated Flow	Op Weight*	Op Pressure	Carrier Wt Range	Sound Power Level Lwa**
	500 ft-lb 678 J	1022-2300	11-22 gpm 40-85 lpm	438-550 lbs 199-250 kg	2465 psi 17 000 kPa	5500-13230 lb 2.5-6.0 t	119 dB(A)

* Operating weight includes hammer, standard tool and average mounting bracket.
** Sound power level Lwa as tested per Directive 2000/14/EC.

Territory	Model	Part Number	Description
NACD LACD APD	H55D S Pin On	249-0023	Silenced configuration. The pin-on configuration provides the least expensive method for attaching to a Caterpillar MHE. Requires only mounting group (pins & bushings) when installed on Cat MHE, requires mounting bracket when installed on SSL/MTL.
	H55D S Flat Top	313-3992	Silenced configuration. The flat top version requires a mounting bracket for installation onto the host machine. This variant of the hammer allows the owner flexibility in moving the hammer to a variety of machines, and allows for installation onto competitive carriers.
EAME	H55D S Pin On	273-0198	Silenced configuration. The pin-on configuration provides the least expensive method for attaching to a Caterpillar MHE. Requires only mounting group (pins & bushings) when installed on Cat MHE, requires mounting bracket when installed on SSL/MTL. **Comes standard in solid wooden box with 2 tools included (1 Moil and 1 Chisel).**
	H55D S Flat Top	313-3993	Silenced configuration. The flat top version requires a mounting bracket for installation onto the host machine. This variant of the hammer allows the owner flexibility in moving the hammer to a variety of machines, and allows for installation onto competitive carriers. **Comes standard in solid wooden box with 2 tools included (1 Moil and 1 Chisel).**

Installation Hardware requirements:

	H55D S Pin On				H55D S Flat Top		
Host Machine	**Mounting Group**	**Mounting Bracket**	**Connecting Hoses (Note 1)**	**Field Installed Hydraulic Kit**	**Mounting Bracket**	**Connecting Hoses (Note 1)**	**Field Installed Hydraulic Kit**
302.5C	249-1144	Not applicable	270-8680	Not required with factory circuit	155-4468	329-7275	Not required with factory circuit
303C CR	249-1145		270-8681		280-9827	330-5359	
303.5C CR							
304C CR	316-0412		270-8682		280-9885		
305C CR							
BH30, BH30W	249-1144		270-8680		155-4468	329-7275	
BH150(w/Aux lines), BH160(w/Aux lines)	249-1145		270-8681		280-9827	330-5359	
SSL/MTL	Not applicable	269-7807	269-7271		Not applicable		
Competitive MHE	Not Available	Consult Cat Work Tools	Dealer made		Consult Cat Work Tools	Dealer made	

Note 1 - Connecting hoses include all parts required to connect the hammer to the factory stick lines
Hose couplings on the hammer end are high vibration coupling (HVC).

Standard Tools:

	Part Number	Stamp ID	Total Length		Working Length		Dia Top		Dia Bottom		Weight	
			in	mm	in	mm	in	mm	in	mm	lbs	kg
Chisel	246-0265	154553	20.47	520	11.77	299	2.20	56	2.20	56	20.50	9.3
Moil	238-1882	153641	20.47	520	11.77	299	2.20	56	2.20	56	20.02	9.1

Other Tools: Available from parts only.

	Part Number	Stamp ID	Total Length		Working Length		Dia Top		Dia Bottom		Weight	
			in	mm	in	mm	in	mm	in	mm	lbs	kg
Spade, Parallel	249-3093	249-3093	22.05	560	13.35	339	2.20	56	4.53	115	21.32	9.7
Spade, Transverse	249-3094	249-3094	22.05	560	13.35	339	2.20	56	4.53	115	21.43	9.7
Compacting Plate	246-2782	155716	16.93	430	8.23	209	2.20	56	9.84	250	50.60	23.0

Other Equipment:

When installing a hammer onto a carrier it is recommended that cab frontal protection be installed. If hammer is to be used for overhead demolition cab frontal and overhead protection is recommended.

H65D S

Product Specifications	Energy Class	BPM	Rated Flow	Op Weight*	Op Pressure	Carrier Wt Range	Sound Power Level Lwa**
	700 ft-lb 950 J	700-2000	11-28 gpm 40-105 lpm	598-818 lbs 271-371 kg	2465 psi 17 000 kPa	6610-19800 lb 3-9 t	123 dB(A)

* Operating weight includes hammer, standard tool and average mounting bracket.
** Sound power level Lwa as tested per Directive 2000/14/EC.

Territory	Model	Part Number	Description
NACD LACD APD	H65D S Pin On	249-3161	Silenced configuration. The pin-on configuration provides the least expensive method for attaching to a Caterpillar MHE. Requires only mounting group (pins & bushings) when installed on Cat MHE, requires mounting bracket when installed on SSL/MTL.
	H65D S Flat Top	312-3266	Silenced configuration. The flat top version requires a mounting bracket for installation onto the host machine. This variant of the hammer allows the owner flexibility in moving the hammer to a variety of machines, and allows for installation onto competitive carriers.
EAME	H65D S Pin On	275-5863	Silenced configuration. The pin-on configuration provides the least expensive method for attaching to a Caterpillar MHE. Requires only mounting group (pins & bushings) when installed on Cat MHE, requires mounting bracket when installed on SSL/MTL. **Comes standard in solid wooden box with 2 tools included (1 Moil and 1 Chisel).**
	H65D S Flat Top	311-4904	Silenced configuration. The flat top version requires a mounting bracket for installation onto the host machine. This variant of the hammer allows the owner flexibility in moving the hammer to a variety of machines, and allows for installation onto competitive carriers. **Comes standard in solid wooden box with 2 tools included (1 Moil and 1 Chisel).**

Installation Hardware requirements:

	H65D S Pin On				H65D S Flat Top			
Host Machine	**Mounting Group**	**Mounting Bracket**	**Connecting Hoses (Note 1)**	**Field Installed Hydraulic Kit**	**Mounting Bracket**	**Connecting Hoses (Note 1)**	**Hydraulic Quick Disconnects**	**Field Installed Hydraulic Kit**
303C CR	252-1211	Not applicable	270-8681	Not required with factory circuit	Not applicable		Not available	Not required with factory circuit
303.5C CR								
304C CR	283-1502		270-8682		308-7541	270-8682		
305C CR								
SSL/MTL	Not applicable	269-7807	269-7271		Not applicable			
BH150(w/Aux lines), BH160(w/Aux lines)	252-1211	Not applicable	270-8681					
307D	Use Flat Top version for this installation				318-2265	313-6573	Not available	Consult Cat Work Tools
308D CR								
414E					305-4984 300-5047 (EAME)	317-0993 313-4791 (EAME)	202-9147 (Not required in EAME)	
416E								
420E								
422E								
428E								
430E								
432E								
442E								
Competitive BHL					Consult Cat Work Tools	Dealer made		Not available
Competitive MHE	Not available	Consult Cat Work Tools	Dealer made	Not available				

Note 1 - Connecting hoses include all parts required to connect the hammer to the factory stick lines
Hose couplings on the hammer end are high vibration coupling (HVC).

Standard Tools:

	Part Number	Stamp ID	Total Length		Working Length		Dia Top		Dia Bottom		Weight	
			in	mm	in	mm	in	mm	in	mm	lbs	kg
Chisel	254-1455	254-1455	22.83	580	12.99	330	2.56	65	2.56	65	30.8	14.0
Moil	254-1456	153807	22.83	580	12.99	330	2.56	65	2.56	65	29.9	13.6

Other Tools: Available from parts only.

	Part Number	Stamp ID	Total Length		Working Length		Dia Top		Dia Bottom		Weight	
			in	mm	in	mm	in	mm	in	mm	lbs	kg
Spade, Parallel	254-1461	254-1461	22.44	570	12.60	320	2.56	65	5.12	130	28.4	12.9
Spade, Transverse	254-1462	254-1462	22.44	570	12.60	320	2.56	65	5.12	130	28.4	12.9
Compacting Plate	254-1459	254-1459	19.09	485	9.25	235	2.56	65	9.84	250	57.6	26.2

Other Equipment:

When installing a hammer onto a carrier it is recommended that cab frontal protection be installed. If hammer is to be used for overhead demolition cab frontal and overhead protection is recommended.

	Energy Class	BPM	Rated Flow	Op Weight*	Op Pressure	Carrier Wt Range	Sound Power Level Lwa**
Product Specifications	900 ft-lb 1220 J	600-1850	13-39 gpm 50-150 lpm	948-959 lbs 430-435 kg	2030 psi 14 000 kPa	11000-17600 lb 5-8 t	133/127 dB(A

* Operating weight includes hammer, standard tool and average mounting bracket.
** Sound power level Lwa as tested per Directive 2000/14/EC.

Models	Part Number	Description
H70 Pin On	203-0950	For use with High Rotation Linkage (HRL) backhoe loaders (D & E series). Non-silenced configuration. The pin-on configuration provides the least expensive method for attaching to a Caterpillar backhoe loader. No additional mounting hardware is required. The design of the pin-on hammer allows for complete fold-up of the hammer for transportation of the carrier. The pin-on version will work with a pin grabber type coupler.
H70 Flat Top	203-0952	The flat-top version requires a mounting bracket for installation onto the host machine. This variant of the hammer allows the owner flexibility in moving the hammer to a variety of machines, and allows for installation onto competitive carriers.
H70 S Flat Top	203-0976	Silenced version. Noise reduction is valuable in restricted work areas such as Hospital zones. Silencing package also reduces recoil shocks to carrier. The flat-top version requires a mounting bracket for installation onto the host machine. This variant of the hammer allows the owner flexibility in moving the hammer to a variety of carriers, and allows for installation onto competitive carriers.

Installation Hardware requirements: **NACD - LACD - APD**

	H70 Pin On				H70 / H70 S Flat Top				
Host Machine	**Mounting Bracket**	**Connecting Hoses (Note 1)**	**Hydraulic Quick Disconnects**	**Field Installed Hydraulic Kit**	**Mounting Bracket**	**Connecting Hoses (Note 1)**	**Hydraulic Quick Disconnects**	**Field Installed Hydraulic Kit**	**Auto-Lube Kit (Machine Mounted)**
416E 420E 422E 428E 430E 432E 442E	Not required	202-9130	202-9147	Consult Cat Work Tools	305-4984	202-9130	202-9147	Consult Cat Work Tools	152-5342 12 volts
307D 308D CR	Use Flat Top version for this installation				318-2265	202-9132	Not available		152-3395 24 volts
Competitive Backhoe Loader					Consult Cat Work Tools	Dealer made		Not available	152-5342 12 volts
Competitive Small Excavator									152-3395 24 volts

Installation Hardware requirements: **EAME**

	H70 Pin On				H70 / H70 S Flat Top				
Host Machine	**Mounting Bracket**	**Connecting Hoses (Note 1)**	**Hydraulic Quick Disconnects**	**Field Installed Hydraulic Kit**	**Mounting Bracket**	**Connecting Hoses (Note 1)**	**Hydraulic Quick Disconnects**	**Field Installed Hydraulic Kit**	**Auto-Lube Kit (Machine Mounted)**
416E 420E 422E 428E 430E 432E 442E 444E	Not required	206-7692	Included in Connecting Hoses	Consult Cat Work Tools	300-5047	206-7692	Included in Connecting Hoses	Consult Cat Work Tools	148-8098
307D 308D CR	Use Flat Top version for this installation				318-2265	202-9132	Not available		
Competitive Backhoe Loader					Consult Cat Work Tools	Dealer made		Not available	
Competitive Small Excavator									

Note 1 - Connecting hoses include all parts required to connect the hammer to the factory stick lines

Standard Tools:

	Part Number	Stamp ID	Total Length		Working Length		Dia Top		Dia Bottom		Weight	
			in	mm	in	mm	in	mm	in	mm	lbs	kg
Chisel	3Q-7613	251	28.74	730	15.94	405	2.76	70	2.76	70	44.0	20.0
Moil	3Q-7615	253	28.74	730	15.94	405	2.76	70	2.76	70	44.0	20.0

Other Tools:

	Part Number	Stamp ID	Total Length		Working Length		Dia Top		Dia Bottom		Weight	
			in	mm	in	mm	in	mm	in	mm	lbs	kg
Long Chisel	121-6544	252	32.68	830	19.88	505	2.76	70	2.76	70	50.6	23.0
Long Moil	128-6946	258	32.68	830	19.88	505	2.76	70	2.76	70	48.4	22.0
Spade, Parallel	206-5620	255	28.35	720	15.55	395	2.76	70	5.91	150	41.4	18.8
Spade, Transverse	206-5619	256	28.35	720	15.55	395	2.76	70	5.91	150	41.4	18.8
Compacting Plate	3Q-7618	257	23.62	600	10.83	275	2.76	70	12.99	330	118.8	54.0

Other Equipment:

When installing a hammer onto a carrier it is recommended that cab frontal protection be installed. If hammer is to be used for overhead demolition cab frontal and overhead protection is recommended.

H90C/H90C S

Product Specifications	Energy Class	BPM	Rated Flow	Op Weight*	Op Pressure	Carrier Wt Range	Sound Power Level Lwa**
	1200 ft-lb 1827 J	500-1450	16-39 gpm 60-150 lpm	1298-1320 lbs 590-600 kg	1958 psi 13 500 kPa	15400-26400 lb 7-12 t	133/127 dB(A)

* Operating weight includes hammer, standard tool and average mounting bracket.

** Sound power level Lwa as tested per Directive 2000/14/EC.

Models	Part Number	Description
H90C Pin On	203-0934	For use with High Rotation Linkage (HRL) backhoe loaders (D & E series, except 446). Non-silenced configuration. The pin-on configuration provides the least expensive method for attaching to a Caterpillar backhoe loader. No additional mounting hardware is required. The design of the pin-on hammer allows for complete fold-up of the hammer for transportation of the carrier. The pin-on version will work with a pin grabber type coupler.
H90C Flat Top	203-1047	The flat-top version requires a mounting bracket for installation onto the host machine. This variant of the hammer allows the owner flexibility in moving the hammer to a variety of machines, and allows for installation onto competitive carriers.
H90C S Flat Top	203-0942	Silenced version. Noise reduction is valuable in restricted work areas such as Hospital zones. Silencing package also reduces recoil shocks to carrier. The flat-top version requires a mounting bracket for installation onto the host machine. This variant of the hammer allows the owner flexibility in moving the hammer to a variety of carriers, and allows for installation onto competitive carriers.

Installation Hardware requirements: **NACD - LACD - APD**

	H90C Pin On				H90C / H90C S Flat Top				
Host Machine	**Mounting Bracket**	**Connecting Hoses (Note 1)**	**Hydraulic Quick Disconnects**	**Field Installed Hydraulic Kit**	**Mounting Bracket**	**Connecting Hoses (Note 1)**	**Hydraulic Quick Disconnects**	**Field Installed Hydraulic Kit**	**Auto-Lube Kit (Machine Mounted)**
416E 420E 422E 428E 430E 432E 442E	Not required	202-9130	202-9147	Consult Cat Work Tools	305-4984	202-9130	202-9147	Consult Cat Work Tools	152-5342 12 volts
307D 308D CR	Use Flat Top version for this installation				318-2265	202-9132	Not available		152-3395 24 volts
311D 312D					219-0667	202-9132	Not available		152-3395 24 volts
Competitive Backhoe Loader					Consult Cat Work Tools	Dealer made		Not available	152-5342 12 volts
Competitive Excavator									152-3395 24 volts

Installation Hardware requirements: **EAME**

	H90C Pin On				H90C / H90C S Flat Top				
Host Machine	**Mounting Bracket**	**Connecting Hoses (Note 1)**	**Hydraulic Quick Disconnects**	**Field Installed Hydraulic Kit**	**Mounting Bracket**	**Connecting Hoses (Note 1)**	**Hydraulic Quick Disconnects**	**Field Installed Hydraulic Kit**	**Auto-Lube Kit (Machine Mounted)**
416E 420E 422E 428E 430E 432E 442E	Not required	206-7692	Including in Connecting Hoses	Consult Cat Work Tools	300-5047	206-7692	Including in Connecting Hoses	Consult Cat Work Tools	148-8098
307D 308D CR	Use Flat Top version for this installation				318-2265	202-9132	Not available		
311D 312D					219-0667	202-9132	Not available		
Competitive Backhoe Loader					Consult Cat Work Tools	Dealer made		Not available	
Competitive Excavator									

Note 1 - Connecting hoses include all parts required to connect the hammer to the factory stick lines

Standard Tools:

	Part Number	Stamp ID	Total Length		Working Length		Dia Top		Dia Bottom		Weight	
			in	mm	in	mm	in	mm	in	mm	lbs	kg
Chisel	150-8827	271	33.07	840	16.42	417	3.31	84	3.31	84	74.8	34.0
Moil	150-8826	273	33.07	840	16.42	417	3.31	84	3.31	84	72.6	33.0

Other Tools:

	Part Number	Stamp ID	Total Length		Working Length		Dia Top		Dia Bottom		Weight	
			in	mm	in	mm	in	mm	in	mm	lbs	kg
Long Chisel	188-3503	272	37.40	950	20.87	530	3.31	84	3.31	84	81.4	37.0
Long Moil	188-3505	278	37.40	950	20.87	530	3.31	84	3.31	84	81.4	37.0
Spade, Parallel	206-5621	275	34.65	880	17.99	457	3.31	84	7.87	200	75.5	34.3
Spade, Transverse	206-5622	276	34.65	880	17.99	457	3.31	84	7.87	200	75.5	34.3

Other Equipment:

When installing a hammer onto a carrier it is recommended that cab frontal protection be installed. If hammer is to be used for overhead demolition cab frontal and overhead protection is recommended.

Product Specifications	Energy Class	BPM	Rated Flow	Op Weight*	Op Pressure	Carrier Wt Range	Sound Power Level Lwa**
	1700 ft-lb 2305 J	430-1300	16-31 gpm 60-120 lpm	1804-1826 lbs 820-830 kg	2103 psi 14 500 kPa	17600-30800 lb 8-14 t	136/126 dB(A)

* Operating weight includes hammer, standard tool and average mounting bracket.
** Sound power level Lwa as tested per Directive 2000/14/EC.

Models	Part Number	Description
H100 Flat Top	203-0915	The flat-top version of the H100 requires a mounting bracket for installation onto the host machine. This variant of the hammer allows the owner flexibility in moving the hammer to a variety of machines, and allows for installation onto competitive carriers.
H100 S Flat Top	203-0925	Silenced version. Noise reduction is valuable in restricted work areas such as Hospital zones. Silencing package also reduces recoil shocks to carrier. The flat-top version of the H100 S requires a mounting bracket for installation onto the host machine. This variant of the hammer allows the owner flexibility in moving the hammer to a variety of carriers, and allows for installation onto competitive carriers.

Installation Hardware requirements:

	H100 / H100 S Flat Top							
	NACD / LACD / APD			EAME				
Host Machine	**Mounting Bracket**	**Connecting Hoses (Note 1)**	**Auto-Lube Kit (Machine mounted)**	**Mounting Bracket**	**Connecting Hoses (Note 1)**	**Auto-Lube Kit (Machine mounted)**	**Hydraulic Quick Disconnects**	**Field Installed Hydraulic Kit**
446D	251-4624	177-1858	152-5342 12 volts	Not available			202-9147	Consult Cat Work Tools
311D 312D 314D CR	123-3343	158-4617	152-3395 24 volts	123-9615	158-4617	148-8098	Not available	
315D M313D M315D M316D	129-1545	261-9508		123-9595	206-7696			
Competitive Backhoe Loader	Consult Cat Work Tools	Dealer made	152-5342 12 volts	Consult Cat Work Tools	Dealer made		Dealer made	Not available
Competitive Small Excavator			152-3395 24 volts					

Note 1 - Connecting hoses include all parts required to connect the hammer to the factory stick lines

Standard Tools:

	Part Number	Stamp ID	Total Length		Working Length		Dia Top		Dia Bottom		Weight	
			in	mm	in	mm	in	mm	in	mm	lbs	kg
Chisel	106-8136	291	35.43	900	21.14	537	3.74	95	3.74	95	101.2	46.0
Moil	106-8135	293	35.43	900	21.14	537	3.74	95	3.74	95	96.8	44.0
Blunt	121-9356	294	31.50	800	17.20	437	3.74	95	3.74	95	94.6	43.0

Other Tools:

	Part Number	Stamp ID	Total Length		Working Length		Dia Top		Dia Bottom		Weight	
			in	mm	in	mm	in	mm	in	mm	lbs	kg
Long Chisel	129-2791	292	41.34	1050	27.05	687	3.74	95	3.74	95	121.0	55.0
Long Moil	129-2798	298	41.34	1050	27.05	687	3.74	95	3.74	95	116.6	53.0
Spade, Parallel	206-5615	295	32.68	830	18.39	467	3.74	95	7.87	200	85.1	38.7
Spade, Transverse	206-5616	296	32.68	830	18.39	467	3.74	95	7.87	200	85.1	38.7

Other Equipment:

When installing a hammer onto a carrier it is recommended that cab frontal protection be installed. If hammer is to be used for overhead demolition cab frontal and overhead protection is recommended.

H115 S

Product Specifications	Energy Class	BPM	Rated Flow	Op Weight*	Op Pressure	Carrier Wt Range	Sound Power Level Lwa**
	2500 ft-lb 3390 J	370-800	18-34 gpm 70-130 lpm	2200 lbs 1000 kg	2030 psi 14 000 kPa	26400-44000 lb 12-20 t	123 dB(A)

* Operating weight includes hammer, standard tool and average mounting bracket.
** Sound power level Lwa as tested per Directive 2000/14/EC.

Models	Part Number	Description
H115 S	**203-0905***	Silenced configuration is standard. Comes standard with flat-top mounting configuration. A mounting bracket is required to install this breaker onto a Caterpillar or competitive carrier.

Installation Hardware requirements:

	H115 S								
			NACD / LACD / APD			EAME			
Host Machine	**Point of carrier manufacture**	**Machine Linkage**	**Mounting Bracket**	**Connecting Hoses (Note 1)**	**Auto-Lube Kit (Machine mounted)**	**Mounting Bracket**	**Connecting Hoses (Note 1)**	**Auto-Lube Kit (Hammer mounted)**	**Field Installed Hydraulic Kit**
312D	Akashi	No Variation	123-3343	158-4616	152-3395 24 volts	123-9615	158-4616	317-4203	Consult Cat Work Tools
314D CR									
315D			129-1545			123-9595			
319D		B	112-5537			123-9596			
320D		B		158-6271			131-1394		
		CB	251-0068			251-0068			
M313D	Grenoble	No Variation	129-1545			123-9595			
M315D									
M316D									
M318D		B	112-5537			123-9596			
M322D									
Competitive Excavator			Consult Cat Work Tools	Dealer made	152-3395 24 volts	Consult Cat Work Tools	Dealer made		Not available

Note:
General - Consult carrier matching guide for installation restrictions with long stick configurations.
Note 1 - Connecting hoses include all parts required to connect the hammer to the factory stick lines.

Standard Tools:

	Part Number	Stamp ID	Total Length		Working Length		Dia Top		Dia Bottom		Weight	
			in	mm	in	mm	in	mm	in	mm	lbs	kg
Chisel	120-3911	641	41.34	1050	25.51	648	4.17	106	4.17	106	147.4	67.0
Moil	120-3912	643	41.34	1050	25.51	648	4.17	106	4.17	106	147.4	67.0
Blunt	120-3913	644	33.46	850	17.64	448	4.17	106	4.17	106	127.6	58.0

Other Tools:

	Part Number	Stamp ID	Total Length		Working Length		Dia Top		Dia Bottom		Weight	
			in	mm	in	mm	in	mm	in	mm	lbs	kg
Long Chisel	129-2792	642	45.28	1150	29.45	748	4.17	106	4.17	106	162.8	74.0
Long Moil	129-2799	648	45.31	1151	29.49	749	4.21	107	4.21	107	165.0	75.0
Pyramidal	151-6106	643K3	41.34	1050	29.45	748	4.17	106	4.17	106	145.2	66.0
Spade, Parallel	123-0079	645	36.22	920	24.33	618	4.17	106	10.24	260	158.4	72.0
Spade, Transverse	123-0080	646	36.22	920	24.33	618	4.17	106	10.24	260	158.4	72.0

Other Equipment:

When installing a hammer onto a carrier it is recommended that cab frontal protection be installed. If hammer is to be used for overhead demolition cab frontal and overhead protection is recommended.

Product Specifications	Energy Class	BPM	Rated Flow	Op Weight*	Op Pressure	Carrier Wt Range	Sound Power Level Lwa**
	3000 ft-lb 4067 J	350-620	26-45 gpm 100-170 lpm	2860 lbs 1300 kg	2030 psi 14 000 kPa	37400-57200 lb 17-26 t	124 dB(A)

* Operating weight includes hammer, standard tool and average mounting bracket.
** Sound power level Lwa as tested per Directive 2000/14/EC.

Models	Part Number	Description
H120C S	**203-0897**	Silenced configuration is standard. Comes standard with flat-top mounting configuration. A mounting bracket is required to install this breaker onto a Caterpillar or competitive carrier.

Installation Hardware requirements:

	H120C S								
			NACD / LACD / APD			EAME			
Host Machine	Point of carrier manufacture	Machine Linkage	Mounting Bracket	Connecting Hoses (Note 1)	Auto-Lube Kit (Machine mounted)	Mounting Bracket	Connecting Hoses (Note 1)	Auto-Lube Kit (Hammer mounted)	Field Installed Hydraulic Kit
315D	Akashi	No Variation	129-1545	175-2645	152-3395 24 volts	123-9595	158-4616	317-4204	Consult Cat Work Tools
319D		B	112-5537			123-9596			
320D		B		149-6093			131-1394		
		CB	251-0068			251-0068			
321D CR		B	112-5537			123-9596			
323D	All	B							
		CB	251-0068			251-0068			
324D		CB							
		DB	251-3801			251-3801			
329D		CB	251-0068			251-0068			
		DB	251-3801			251-3801			
M315D M316D	Grenoble	No Variation	129-1545			123-9595			
M318D M322D		B	112-5537			123-9596			
Competitive Excavator			Consult Cat Work Tools	Dealer made	152-3395 24 volts	Consult Cat Work Tools	Dealer made		Not available

Note:
General - Consult carrier matching guide for installation restrictions with long stick configurations.
Note 1 - Connecting hoses include all parts required to connect the hammer to the factory stick lines.

Standard Tools:

	Part Number	Stamp ID	Total Length		Working Length		Dia Top		Dia Bottom		Weight	
			in	mm	in	mm	in	mm	in	mm	lbs	kg
Chisel	117-0468	661	41.34	1050	24.41	620	4.53	115	4.53	115	171.6	78.0
Moil	117-0469	663	41.34	1050	24.41	620	4.53	115	4.53	115	169.4	77.0
Blunt	117-0470	664	33.46	850	16.54	420	4.53	115	4.53	115	149.6	68.0

Other Tools:

	Part Number	Stamp ID	Total Length		Working Length		Dia Top		Dia Bottom		Weight	
			in	mm	in	mm	in	mm	in	mm	lbs	kg
Long Chisel	129-2793	662	45.28	1150	28.35	720	4.53	115	4.53	115	187.0	85.0
Long Moil	129-2800	668	45.28	1150	28.35	720	4.53	115	4.53	115	187.0	85.0
Pyramidal	151-6107	663K3	41.34	1050	24.41	620	4.53	115	4.53	115	167.2	76.0

Other Equipment:

When installing a hammer onto a carrier it is recommended that cab frontal protection be installed. If hammer is to be used for overhead demolition cab frontal and overhead protection is recommended.

H130 S

Product Specifications	Energy Class	BPM	Rated Flow	Op Weight*	Op Pressure	Carrier Wt Range	Sound Power Level Lwa**
	3500 ft-lb 4745 J	320-600	31-57 gpm 120-220 lpm	3740 lbs 1700 kg	2030 psi 14 000 kPa	41800-70400 lb 19-32 t	124 dB(A)

* Operating weight includes hammer, standard tool and average mounting bracket.
** Sound power level Lwa as tested per Directive 2000/14/EC.

Models	Part Number	Description
H130 S	**203-0882**	Silenced configuration is standard. Comes standard with flat-top mounting configuration. A mounting bracket is required to install this breaker onto a Caterpillar or competitive carrier.

Installation Hardware requirements:

	H130 S								
			NACD / LACD / APD			EAME			
Host Machine	**Point of carrier manufacture**	**Machine Linkage**	**Mounting Bracket**	**Connecting Hoses (Note 1)**	**Auto-Lube Kit (Machine mounted)**	**Mounting Bracket**	**Connecting Hoses (Note 1)**	**Auto-Lube Kit (Hammer mounted)**	**Field Installed Hydraulic Kit**
320D	Akashi	B	112-5537	149-6093	152-3395 24 volts	123-9596	130-8266	317-4205	Consult Cat Work Tools
		CB	251-0068			251-0068			
321D CR		B	112-5537			123-9596			
323D	All	B							
		CB	251-0068			251-0068			
324D		CB							
		DB	251-3801			251-3801			
328D CR	Akashi	CB	251-0068			251-0068			
329D	All	CB	251-0068			251-0068			
		DB	251-3801			251-3801			
336D	All	DB	251-3801			251-3801			
		TB	258-7936			258-7936			
M318D	Grenoble	B	112-5537			123-9596			
M322D									
Competitive Excavator			Consult Cat Work Tools	Dealer made	152-3395 24 volts	Consult Cat Work Tools	Dealer made		Not available

Note:
General - Consult carrier matching guide for installation restrictions with long stick configurations.
Note 1 - Connecting hoses include all parts required to connect the hammer to the factory stick lines.

Standard Tools:

	Part Number	Stamp ID	Total Length		Working Length		Dia Top		Dia Bottom		Weight	
			in	mm	in	mm	in	mm	in	mm	lbs	kg
Chisel	120-5963	681	43.31	1100	25.59	650	5.12	130	5.12	130	228.8	104.0
Moil	120-5964	683	43.31	1100	25.59	650	5.12	130	5.12	130	226.6	103.0
Blunt	120-5965	684	35.43	900	17.72	450	5.12	130	5.12	130	198.0	90.0

Other Tools:

	Part Number	Stamp ID	Total Length		Working Length		Dia Top		Dia Bottom		Weight	
			in	mm	in	mm	in	mm	in	mm	lbs	kg
Super Blunt	151-6113	684T2	35.43	900	17.72	450	5.12	130	5.51	140	213.4	97.0
Long Chisel	129-2794	682	49.21	1250	31.50	800	5.12	130	5.12	130	264.0	120.0
Soft Rock Chisel	249-5128	681F3	41.34	1050	23.62	600	5.12	130	5.51	140	235.4	107.0
Hard Rock Chisel	249-5129	681A2	43.31	1100	25.59	650	5.12	130	5.12	130	217.1	98.7
Long Moil	129-2801	688	49.21	1250	31.50	800	5.12	130	5.12	130	264.0	120.0
Pyramidal	151-6108	683K3	43.31	1100	25.59	650	5.12	130	5.12	130	228.8	104.0

Other Equipment:

When installing a hammer onto a carrier it is recommended that cab frontal protection be installed. If hammer is to be used for overhead demolition cab frontal and overhead protection is recommended.

Product Specifications	Energy Class	BPM	Rated Flow	Op Weight*	Op Pressure	Carrier Wt Range	Sound Power Level Lwa**
	5500 ft-lb 7457 J	350-600	42-60 gpm 160-230 lpm	5170 lbs 2350 kg	2320 psi 16 000 kPa	55000-88000 lb 25-40 t	126 dB(A)

* Operating weight includes hammer, standard tool and average mounting bracket.
** Sound power level Lwa as tested per Directive 2000/14/EC.

Models	Part Number	Description
H140D S	**208-0724**	Silenced configuration is standard. Comes standard with flat-top mounting configuration. A mounting bracket is required to install this breaker onto a Caterpillar or competitive carrier.

Installation Hardware requirements:

	H140D S								
			NACD / LACD / APD			EAME			
Host Machine	**Point of carrier manufacture**	**Machine Linkage**	**Mounting Bracket**	**Connecting Hoses (Note 1)**	**Auto-Lube Kit (Machine mounted)**	**Mounting Bracket**	**Connecting Hoses (Note 1)**	**Auto-Lube Kit (Hammer mounted)**	**Field Installed Hydraulic Kit**
323D	All	CB	251-0068	149-6093	152-3395 24 volts	251-0068	130-8266	317-4205	Consult Cat Work Tools
324D		CB							
		DB	251-3801			251-3801			
328D CR	Akashi	CB	251-0068			251-0068			
329D	All	CB	251-0068			251-0068			
		DB	251-3801			251-3801			
336D		DB	251-3801			251-3801			
		TB	258-7936			258-7936			
Competitive Excavator			Consult Cat Work Tools	Dealer made	152-3395 24 volts	Consult Cat Work Tools	Dealer made		Not available

Note:
General - Consult carrier matching guide for installation restrictions with long stick configurations.
Note 1 - Connecting hoses include all parts required to connect the hammer to the factory stick lines.

Standard Tools:

	Part Number	Stamp ID	Total Length		Working Length		Dia Top		Dia Bottom		Weight	
			in	mm	in	mm	in	mm	in	mm	lbs	kg
Chisel	188-3487	801	47.24	1200	23.78	604	5.51	140	5.51	140	286.0	130.0
Moil	188-3491	803	47.24	1200	23.78	604	5.51	140	5.51	140	279.4	127.0
Blunt	188-3493	804	41.34	1050	17.87	454	5.51	140	5.51	140	270.6	123.0

Other Tools:

	Part Number	Stamp ID	Total Length		Working Length		Dia Top		Dia Bottom		Weight	
			in	mm	in	mm	in	mm	in	mm	lbs	kg
Super Blunt	188-3494	804T2	43.31	1100	19.84	504	5.51	140	5.91	150	294.8	134.0
Pyramidal	188-3492	803K3	47.24	1200	23.78	604	5.51	140	5.51	140	290.4	132.0
Long Chisel	217-3382	802	55.12	1400	31.65	804	5.51	140	5.51	140	343.2	156.0
Soft Rock Chisel	249-5131	801F3	43.31	1100	19.84	504	5.51	140	5.91	150	299.2	136.0
Hard Rock Chisel	249-5130	801A2	47.24	1200	23.78	604	5.51	140	5.51	140	275.0	125.0
Long Moil	217-3380	808	55.12	1400	31.65	804	5.51	140	5.51	140	334.4	152.0

Other Equipment:

When installing a hammer onto a carrier it is recommended that cab frontal protection be installed. If hammer is to be used for overhead demolition cab frontal and overhead protection is recommended.

H160D S

Product Specifications	Energy Class	BPM	Rated Flow	Op Weight*	Op Pressure	Carrier Wt Range	Sound Power Level Lwa**
	8000 ft-lb 10847 J	380-560	58-82 gpm 220-310 lpm	6946 lbs 3150 kg	2320 psi 16 000 kPa	70400-121000 lb 32-55 t	130 dB(A)

* Operating weight includes hammer, standard tool and average mounting bracket.
** Sound power level Lwa as tested per Directive 2000/14/EC.

Models	Part Number	Description
H160D S	**208-0736**	Silenced configuration is standard. Comes standard with flat-top mounting configuration. A mounting bracket is required to install this breaker onto a Caterpillar or competitive carrier.

Installation Hardware requirements:

	H160D S								
			NACD / LACD / APD			EAME			
Host Machine	**Point of carrier manufacture**	**Machine Linkage**	**Mounting Bracket**	**Connecting Hoses (Note 1)**	**Auto-Lube Kit (Machine mounted)**	**Mounting Bracket**	**Connecting Hoses (Note 1)**	**Auto-Lube Kit (Hammer mounted)**	**Field Installed Hydraulic Kit**
336D	All	DB	251-4647	149-6093	152-3395 24 volts	251-4647	130-8266	317-4206	Consult Cat Work Tools
		TB	255-7552			255-7552			
345D		TB		213-1333					
		UB	225-9607			225-9607			
Competitive Excavator			Consult Cat Work Tools	Dealer made		Consult Cat Work Tools	Dealer made		Not available

Note:
General - Consult carrier matching guide for installation restrictions with long stick configurations.
Note 1 - Connecting hoses include all parts required to connect the hammer to the factory stick lines.

Standard Tools:

	Part Number	Stamp ID	Total Length		Working Length		Dia Top		Dia Bottom		Weight	
			in	mm	in	mm	in	mm	in	mm	lbs	kg
Chisel	188-3495	901	55.31	1405	29.13	740	6.22	158	6.30	160	433.4	197.0
Moil	188-3499	903	55.31	1405	29.13	740	6.22	158	6.30	160	433.4	197.0
Blunt	188-3501	904	49.41	1255	23.23	590	6.22	158	6.30	160	411.4	187.0

Other Tools:

	Part Number	Stamp ID	Total Length		Working Length		Dia Top		Dia Bottom		Weight	
			in	mm	in	mm	in	mm	in	mm	lbs	kg
Super Blunt	188-3502	904T2	49.21	1250	23.03	585	6.22	158	6.89	175	470.8	214.0
Long Chisel	217-3381	902	59.25	1505	33.07	840	6.22	158	6.30	160	488.4	222.0
Soft Rock Chisel	249-5132	901F3	49.21	1250	23.03	585	6.22	158	6.89	175	457.6	208.0
Hard Rock Chisel	249-5133	901A2	55.31	1405	29.13	740	6.22	158	6.30	160	411.4	187.0
Long Moil	217-3379	908	59.25	1505	33.07	840	6.22	158	6.30	160	486.2	221.0
Pyramidal	188-3500	903K3	55.31	1405	29.13	740	6.22	158	6.30	160	433.4	197.0

Other Equipment:

When installing a hammer onto a carrier it is recommended that cab frontal protection be installed. If hammer is to be used for overhead demolition cab frontal and overhead protection is recommended.

Product Specifications	Energy Class	BPM	Rated Flow	Op Weight*	Op Pressure	Carrier Wt Range	Sound Power Level Lwa**
	11000 ft-lb 14913 J	370-520	67-88 gpm 250-330 lpm	8360 lbs 3800 kg	2320 psi 16 000 kPa	88000-165000 lb 40-75 t	127 dB(A)

* Operating weight includes hammer, standard tool and average mounting bracket.
** Sound power level Lwa as tested per Directive 2000/14/EC.

Models	Part Number	Description
H180D S	249-0024	Silenced configuration is standard. Comes standard with flat-top mounting configuration. A mounting bracket is required to install this breaker onto a Caterpillar or competitive carrier.

Installation Hardware requirements:

	H180D S								
			NACD / LACD / APD			EAME			
Host Machine	Point of carrier manufacture	Machine Linkage	Mounting Bracket	Connecting Hoses (Note 1)	Auto-Lube Kit (Machine mounted)	Mounting Bracket	Connecting Hoses (Note 1)	Auto-Lube Kit (Hammer mounted)	Field Installed Hydraulic Kit
345D	All	TB	255-7552	213-1333	152-3395 24 volts	255-7552	130-8296	317-4206	Consult Cat Work Tools
		UB	225-9607			225-9607			
365C	Gosselies	VB		197-4102					
		WB	226-2411			226-2411			
Competitive Excavator			Consult Cat Work Tools	Dealer made		Consult Cat Work Tools	Dealer made		Not available

Note:
General - Consult carrier matching guide for installation restrictions with long stick configurations.
Note 1 - Connecting hoses include all parts required to connect the hammer to the factory stick lines.

Standard Tools:

	Part Number	Stamp ID	Total Length		Working Length		Dia Top		Dia Bottom		Weight	
			in	mm	in	mm	in	mm	in	mm	lbs	kg
Chisel	263-3147	111	57.09	1450	27.24	692	6.65	169	6.85	174	506.0	230.0
Moil	263-3145	113	57.09	1450	27.24	692	6.65	169	6.85	174	495.0	225.0
Blunt	263-3850	114	51.18	1300	21.34	542	6.65	169	6.85	174	495.0	225.0

Other Tools:

	Part Number	Stamp ID	Total Length		Working Length		Dia Top		Dia Bottom		Weight	
			in	mm	in	mm	in	mm	in	mm	lbs	kg
Super Blunt	263-3851	114T2	53.15	1350	23.31	592	6.65	169	7.99	203	545.6	248.0
Soft Rock Chisel	263-3862	111F3	57.09	1450	27.24	692	6.65	169	6.85	174	528.0	240.0
Hard Rock Chisel	263-3861	111A2	57.09	1450	27.24	692	6.65	169	6.85	174	495.0	225.0
Pyramidal	263-3863	113K3	57.09	1450	27.24	692	6.65	169	6.85	174	473.0	215.0

Other Equipment:

When installing a hammer onto a carrier it is recommended that cab frontal protection be installed. If hammer is to be used for overhead demolition cab frontal and overhead protection is recommended.

Cat H35D S-H180D S Hydraulic Hammers

Contact Information:

For application and sizing related issues on hammers, please contact:

USA & Canada

Caterpillar Impact Products Ltd (CIPL) at +1-913-217-2662.

Offices are located in Kansas City, KS.

Europe, Africa & Middle East:

Caterpillar Impact Products Ltd. (CIPL) at +44-1753-843-775.

Offices are located in Slough, United Kingdom.

For further information on connecting hoses, hydraulic kits and special brackets, please contact:

USA & Canada

Caterpillar Work Tools (CWTS) at +1-877-850-2136

Europe, Africa & Middle East:

Caterpillar Work Tools (CWTS) at +31-736-399-600

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