MH3027

Wheel Material Handler

Engine		
Engine Model	Cat® C7.1 ACERT™	
Emissions	U.S. EPA Tier 4 Final/ EU Stage IV	
Net Power (ISO 14396)	129 kW	173 hp
Net Power (ISO 14396) (Metric)		175.4 hp (PS)

Weights		
Operating Weight (without work tool attachment)	29 651 kg	65,370 lb

Working Ranges

	Drop Nose Stick		Straight Stick	
Maximum Height	15.2 m	49'9"	13.6 m	44'9"
Maximum Reach	13.6 m	44'8"	11.9 m	38'11"
Maximum Depth	3.9 m	13'0"	3.0 m	10'0"

Introduction

We know that when it comes to material handling equipment, your success depends on high productivity and dependable performance. The new Cat MH3027 Material Handler is designed where harsh environments and severe duty applications of industrial, scrap recycling, waste handling and recycling operations call for safe, quality and reliable products. The MH3027 is a purpose-built material handler from the ground up. Everything about this machine is designed to do one thing well – move material.

Contents

Key Features

Commitment from the Ground Up

More Options for Your Safety and Comfort

Introducing more options to meet your specific application needs. Decrease the risk for slips and falls with the optional "ground level entry and exit" hydraulic cab riser system. This innovative system will lower the cab to ground level for operator entry and exit. This is one of many features the MH3027 brings to improve the safety and comfort of your operations. Built for your needs, a cab to platform option is also available.

Efficiency

Recognizing that fuel efficiency is directly affected by hydraulic performance, the hydraulic system in the MH3027 is carefully designed to provide the work needed without wasting fuel. A high capacity hydraulic cooling system keeps operating temperatures low, resulting in longer component life, higher efficiency and lower repair cost.

Structural Integrity

You expect quality and durability. The MH3027 is purpose-built from the ground up with frame construction that utilizes continuous welds, extensive chamfering, “feathered” weld end points and radiused corners. Critical areas use high grade structural steel, and areas susceptible to side loading have pins oversized by 15%-20%, with threaded retention. To withstand extreme loads encountered in material handling applications, both the boom and the stick are built from single piece continuous top and side plates – no seams or baffles.

User-Friendly Technology

Effective operator and machine communication is critical in any job application to ensure productivity. The MH3027 features Cat Product Link™ in conjunction with a user-friendly operating system that clearly communicates machine conditions in plain language, no need to research code definitions. In addition, the in-cab monitor reports machine conditions, warnings and maintenance checks. The online VisionLink® user interface can help you effectively manage your fleet and lower operating costs. Operators can adjust machine functions, such as joystick control sensitivity through the operating system.

Lower Operating Cost

Low operating cost was one of the top priorities throughout the MH3027’s design phase. An innovative hydraulic system keeps operating temperatures low for longer component life, higher efficiency and lower repair cost.
The Cat C7.1 ACERT engine is designed for maximum fuel efficiency and increased power density, while meeting Tier 4 Final/Stage IV emission standards. The combination of extending component life, optimizing fuel efficiency and an innovative hydraulic system all work together to provide the lowest possible operating cost.

Hydraulic System and Power Train

Effective Hydraulics and Power Train – Improve Your Machine's Performance

Machine productivity depends on hydraulic performance. The MH3027's hydraulic system is designed to provide power without compromising efficiency, and protect component life to keep your machine running.

Hydraulic Performance

Proper power distribution on the MH3027 allows you to run simultaneous operations without compromising performance or efficiency. A single pump system produces hydraulic power for the implements, work tools, travel and cab riser systems. A dedicated swing pump, closed loop system provides swing priority at all times, providing improved power management and performance.

Electro Hydraulic Controls

Electro hydraulic controls reduce noise and vibration. They are programmable and can be set to memory.

Reinforced Tubing

Hydraulic steel tubing provides lower maintenance, higher pressure operation, and lower hydraulic oil operating temperature by producing superior heat transfer.

Low Operating Temperatures

Running at lower operating temperatures protects component life. The MH3027's hydraulic system is cooled through its own cooler mounted side-by-side with the engine radiator and air-to-air aftercooler (ATAAC). Mounting these cores side-by-side improves cooling efficiency and allows for easier cleaning of the cores in dirty environments. The variable speed auto-reversing fan assists in keeping the cores operating at peak efficiency and minimizing downtime for cleaning.

Fast Cycle Times

Faster cycle times increase productivity. An efficient load sensing hydraulic system supplies quick lift and implement performance while providing control regardless of boom, stick or travel demands. The dedicated closed-loop swing system ensures that swing speed is not affected by other machine functions.

Proven Power Train

True four wheel mechanical drive provides excellent maneuvering performance even on uneven terrain. Power is provided by a variable displacement hydraulic motor, with integrated hydraulic braking through a 2-speed transmission which drives the two axles. Oscillating rear housing with lock-out feature and solid rubber tires provide machine stability and traction when operating free on wheels.

Variable, Convenient Travel

Machine movement is regulated through a three mode shift on the go travel system that includes a creeper mode up to 5.3 km/h (3.3 mph) and a standard mode up to 20 km/h (12.4 mph). Steering and speed are controlled through the joystick controls while forward and reverse direction is controlled through a right foot pedal.

Flow Management

Operating costs are cut with flow management technologies. Flow-sharing compensation delivers flow on-demand for smooth, efficient operations, regardless of load. A load sensing pump generates only the flow and pressure required to meet system demands based on the work being done.

Your operators face harsh working environments that can affect the durability of your equipment. With this in mind, the MH3027 was built beyond industry standards. Structures were subjected to extensive strain gauge testing and finite element analysis to ensure build quality and durability. Not cutting any corners, structural grade steel is used in critical areas.

Built to last, the MH3027 has continuous welds along with chamfering and feathering techniques. Pins and bushings are oversized to prevent stress failures and lubricated through the automatic lubrication system to enhance component durability.

Frame

The MH3027's frame is divided into an upper and lower portion. The upper frame houses the hydraulic cab riser, counterweight, boom, engine and hydraulic system. The upper frame attaches to the lower frame through the MH3027's rotating axis. The lower tapered frame design is unique in the way the swing bearing is mounted directly to the main structure. Increasing rigidity and strength, while insuring the upper structure is kept clear of the material being handled. It also allows longer stabilizers to be installed for increased stability and even weight distribution.

Hydraulic Cab Riser

With the MH3027, there are two styles of hydraulic cab risers available to meet the specific demands of your application. The hydraulic cab to ground linkage option is integrated into the left front corner of the upper frame for providing the operator with a stable work platform. The cab to platform option provides the same eye level view of the work area. Less pilot hose routing due to electro hydraulic system minimizes risk for hose rupture. Less maintenance is required with greaseless bearings in the stabilizers and the cab to ground linkage.

1 *Cab to Platform*

2 *Hydraulic Cab to Ground*

Structure and Frame

Structural Integrity

2

The MH3027 is meant to be an integral part of your operations for many years to come, built strong with thick plates, radiused corners and detailed welds.

Front Structure

Durability – No Compromises

You know that a material handler works only as good as its front linkage is able to handle the job. The MH3027's boom and stick are purpose built for the loads encountered in bulk material handling applications.

Careful and detailed handling of stresses ensures that the MH3027 has the durability you need for your day-to-day operation. The boom and stick top and side plates are manufactured from single plates of steel to eliminate the need for internal baffles and cross boom weld joints. Feathered welds and strengthened connections compliment the structural integrity of the front linkage.

Automatic lubrication on linkage pins and bushings extend component life, protecting your investment.

Excellent lift performance is delivered with dual boom cylinders and stick cylinders. The MH3027 comes equipped with either the drop nose stick for scrap recycling applications or a straight stick for waste and recycling applications. These front structures provide operators a large working envelope, minimizing machine travel and decreasing operation costs.

Fuel Efficient Engine

Engineered to Lower Your Operating Costs.

Engine and Emissions

The Cat C7.1 ACERT engine is designed for maximum fuel efficiency and increased power density, while meeting Tier 4 Final/Stage IV emission standards. This engine features innovative Cat electronics, fuel injection process, air-management systems, aftertreatment solution with Selective Catalytic Reduction, and a fuel efficient regeneration system. The engine utilizes a fully passive regeneration system which automatically removes soot from the Diesel Particulate Filter without interrupting your machine's work cycle.

Efficient Systems and Components

Innovative systems intelligently lower the average working engine speeds and reduce the overall system heat loads which result in significantly improved performance and fuel efficiency.

Powerful Engine Cooling System

The MH3027's engine cooling system adjusts to demands of work applications. Rated for a 202 kW (275 hp) engine, the debris resistant cooling system incorporates a hydraulically driven variable speed reversing fan, extending component life. Side by side coolers enable easy cleaning and reduces plugging (straight fin design).

Enhanced Fuel Efficiency with Auto Idle

The fuel saving auto idle feature reduces the engine rpm back to idle after five seconds of inactivity, decreasing fuel consumption. The auto engine shutdown feature defaults to activate and turn off the engine after 5 minutes, providing the machine is in a required safe operating mode condition.

Next Generation Fuel Systems

Advanced injection timing precisely controls the fuel injection process through a series of carefully timed microbursts, providing more control of combustion for the cleanest, most efficient fuel burn. On the MH3027 the high pressure common rail fuel systems boost performance and reduce soot for the C7.1 ACERT engine.

Cat NO_X Reduction System

The Cat NO_X Reduction System (NRS) captures and cools a small quantity of exhaust gas, then routes it back into the combustion chamber where it drives down combustion temperatures and reduces NO_X emissions.

Aftertreatment Technologies

To meet the additional 80% reduction in NO_X emissions required by Tier 4 Final/Stage IV emission standards, one new system, the Selective Catalytic Reduction (SCR), has been added.

Diesel Exhaust Fluid (DEF)

Cat engines equipped with an SCR system inject DEF into the exhaust to reduce NO_X emissions. DEF is a precisely mixed solution of 32.5% high purity chemical grade urea and 67.5% de-ionized water. DEF must meet the requirements outlined in the International Organization for Standardization (ISO) standard 22241-1. ISO 22241-1 requirements are met by many brands of DEF, including those that carry the AdBlue or API certifications.

Integrated Technologies

Monitor, manage, and enhance job site operations.

Cat Connect makes smart use of technology and services to improve your job site efficiency with equipment management, safety, and sustainability capabilities. Using the data from technology-equipped machines, you'll get more information and insight into your equipment and operations than ever before.

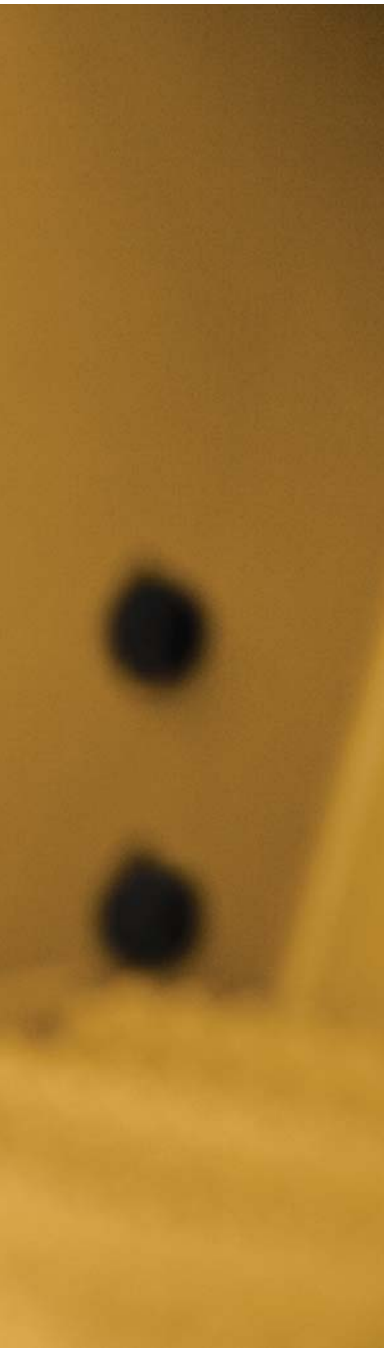
Cat Connect technologies offers improvements in these key areas:

EQUIPMENT MANAGEMENT

Equipment Management – increase uptime and reduce operating costs.

SAFETY

Safety – enhance job site awareness to keep your people and equipment safe.



DETECT Technologies

DETECT technologies help keep people and equipment safe by enhancing operator awareness of the work area around working equipment and by monitoring and reporting unsafe conditions, like avoidance zones.

Rear Vision Camera

The standard rear vision camera greatly enhances visibility behind the machine to help the operator work more productively. Work with greater confidence and at peak potential while keeping people and assets safe.

Optional Side Vision Camera

An additional right side vision camera is available to increase worksite visibility.

LINK Technologies

LINK technologies wirelessly connect you to your equipment, giving you valuable insight into how your machine or fleet is performing so you can make timely, fact-based decisions that can boost job site efficiency and productivity.

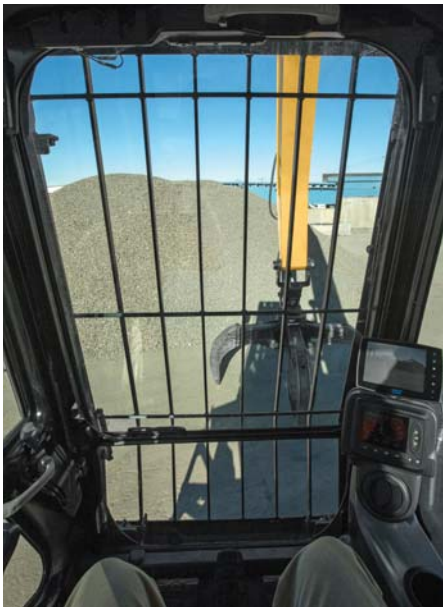
Product Link/VisionLink

Product Link is deeply integrated into your machine, giving you access to timely information like machine location, hours, fuel usage, idle time and event codes via the online VisionLink user interface can help you effectively manage your fleet and lower operating costs.

Operate the MH3027 with less fatigue and greater comfort. The operator station is ergonomically designed to provide a quiet, safe and comfortable work environment. Highly visible monitors, easily accessible switch consoles and operating controls reduce fatigue for your operator. With large windows and joystick controlled steering the MH3027 cab provides ideal job site visibility.

Operator Station

Less Fatigue and Greater Comfort



Cab Comfort

Comfortable operators make productive operators, which is why the MH3027 is equipped with our Cat cab. The interior of the cab is spacious, and controls are ergonomically located within comfortable reach for the operator. This sturdy operator station features window panes that are attached directly onto the frame eliminating the need for sills that may be visual obstacles and weak stress points. Operators will feel less fatigued after a day of work in the air-ride suspension seat with adjustable armrests.

Ground Level Access Hydraulic Riser Option

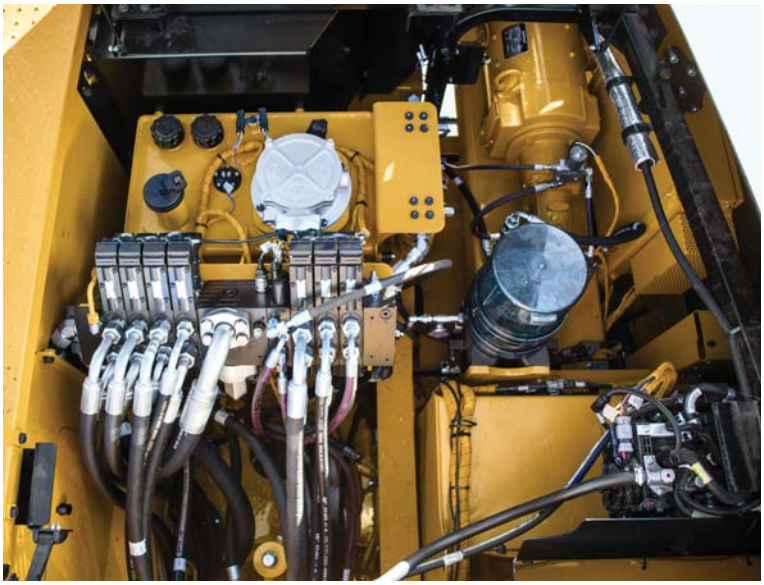
Avoid unnecessary hassles and potential injuries. Start your day walking into the cab at ground level with the optional innovative hydraulic cab riser system. The cab riser can reach a height of 5.5 m (18'0") (eye level) in approximately 8 seconds, and come back to the ground in approximately 10 seconds.

Increased Productivity and Enhanced Ergonomics with Electro Hydraulic Joystick Controls

Experience less operator fatigue with smoother, quieter electro hydraulic joystick controls that eliminate vibration. Customizable machine functions allows the machine to be fine tuned to operator preferences.

Serviceability

Efficient Servicing for More Productivity



Primary service points are easily accessible through convenient access doors and platforms on the sides and top of the machine. Components can be easily located with the engine and cooling system's longitudinal layout. Access doors are hinged with supporting gas struts, ensuring that one technician can easily access all maintenance points.

Spacious Compartments

Purposefully designed, the spacious compartments allow for technicians to maneuver easily while accessing the engine, cooling system, hydraulic components and filters for maintenance and inspection.

Labeled Service Points

The guesswork has been taken out of identifying key hydraulic hoses and electrical wiring with name labels to ease maintenance.

Automatic Lubrication

Machine life is improved and operating costs are lowered by having the machine in charge of timely lubrication intervals. Upper auto-lube sends grease based on duration runtime. The machine is factory set to run grease point lubrication at regular intervals. The lower is manually lubricated from a central grease point located behind the lower control valve on the carbody frame.

Guards, Railings and Anti-Slip Surfaces

Being able to safely service machinery is a primary concern for all owners. Equipped with handrails and anti-slip surfaces, operators and technicians can safely perform inspections and maintenance.

Safety and Security

Your Safety Is Our Priority

Ground Level Access Cab

You are safer from the risk of slips and falls with the MH3027's ground entry and exit cab riser system (optional). In the event of a power loss, a cab riser pressure release valve located in the operator station and at ground level allows for the cab to be lowered, enabling the operator to safely exit the machine.

Ideal for operator familiarization training, cab glass cleaning, allowing safe access and exit for all.

MAINTAIN A CLEAN WORK STATION, SAFELY, CONVENIENTLY

Optional Falling Object Guard System (FOGS)

Falling and flying debris is one of the hazards of the workplace. To protect your operator, the MH3027 can come equipped with the impact-absorbing cab guard that conforms to ISO 10262:1998 safety standards. The Falling Object Guarding System consists of both a top and front guard.

High Operator Visibility

The ability to see your work area is critical to a safe working environment. The cab is purposefully designed to provide high visibility and ensure that the operator can view his work area. The cab includes a rear window that serves as an emergency exit. Joystick steering as standard negates the need for a steering wheel and column, providing a less obstructed view in front of the operator, also allowing for easier ingress and egress. In addition, a cab mounted windshield wiper improves operator visibility in wet weather conditions.

Rearview Cameras

Having line of sight to what is happening behind the machine is vital in maintaining a safe work environment, which is why a rearview camera is mounted on the counterweight. The live video transmission is fed through the HD color monitor in the cab. An optional right side camera adds greater visibility to the job site.

Stick Limiter for Safer Operations

Maintain safe working distances with the stick limiter, which prevents the work tool from coming into close proximity to the operator station. Function override controls allow for up close work.

Complete Customer Care
Commitment to Your Uptime

Product Support
You can maximize your machine's uptime with the Cat worldwide dealer network. You can also decrease your repair costs by utilizing Cat remanufactured components.

Customer Support Agreements
A Customer Support Agreement (CSA) is an arrangement between you and your Cat dealer that helps you lower your total cost per ton. CSAs are flexible, allowing them to be tailored to your business needs. They can range from simple Preventive Maintenance Kits to elaborate Total Cost Performance Guarantees. Having a CSA with your Cat dealer enables more time for you to do what you do best – run your business.

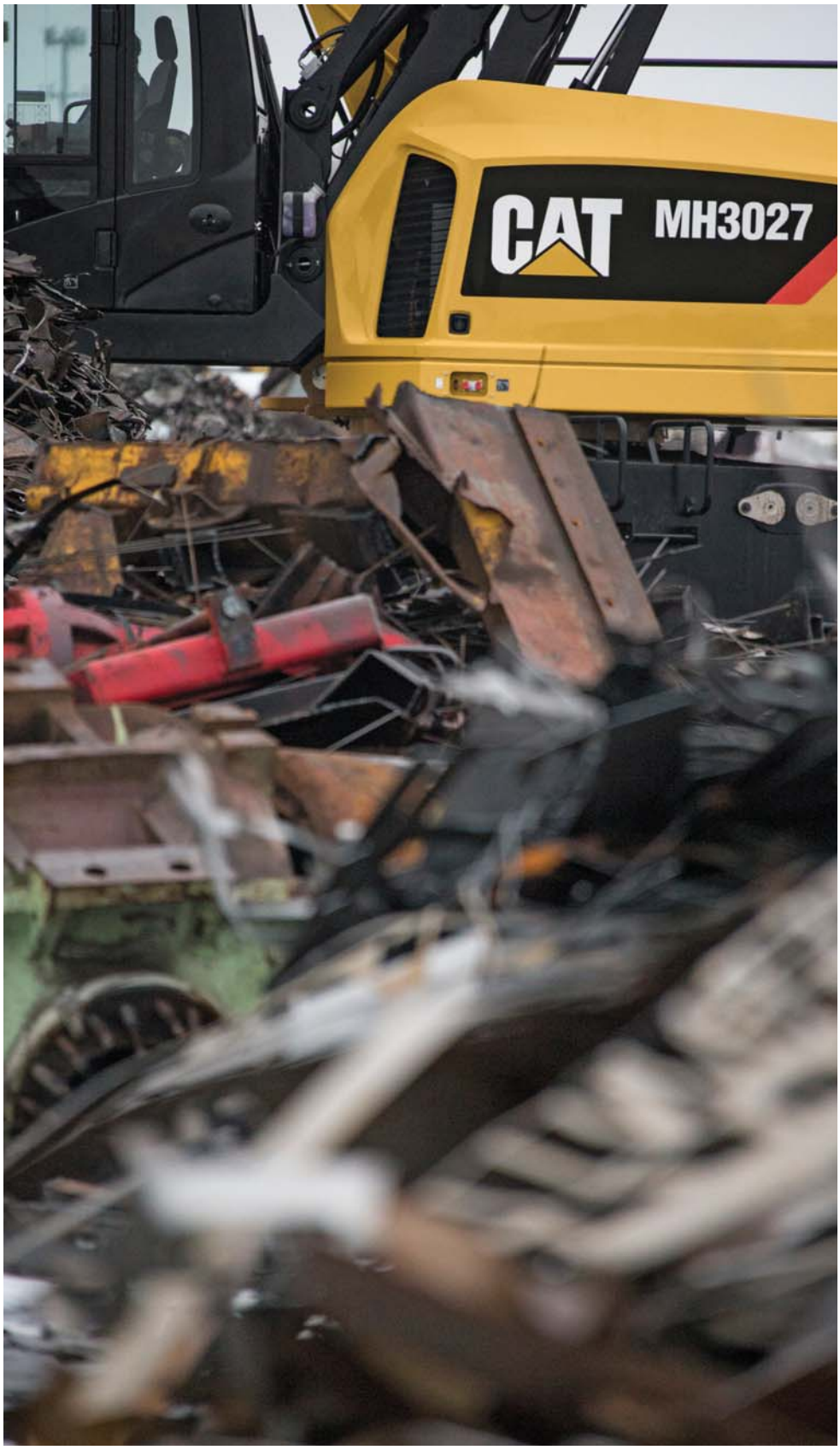
Machine Selection
What are your job requirements and machine attachments? What production do you need? Your Cat dealer can provide recommendations to help you make the right machine configuration decisions.

Operation
You can boost your profits by improving your operator's techniques. Your Cat dealer has videos, literature and other ideas to help increase productivity. Caterpillar offers certified operator training to help maximize the return on your investment.

Renowned Cat Dealer Support
- Your Cat dealer is ready to help you every step of the way. From new or used machine sales, to rental or rebuild options, your Cat dealer can provide an optimal solution to your business needs.
- Unsurpassed worldwide parts availability, trained technicians and customer support agreements maximize your machine uptime.
- Financing options are offered to meet a variety of customer needs.

Sustainability

Investing in a Better Tomorrow



Low Emissions

The C7.1 ACERT engine meets Tier 4 Final/ Stage IV emission standards.

Rebuild

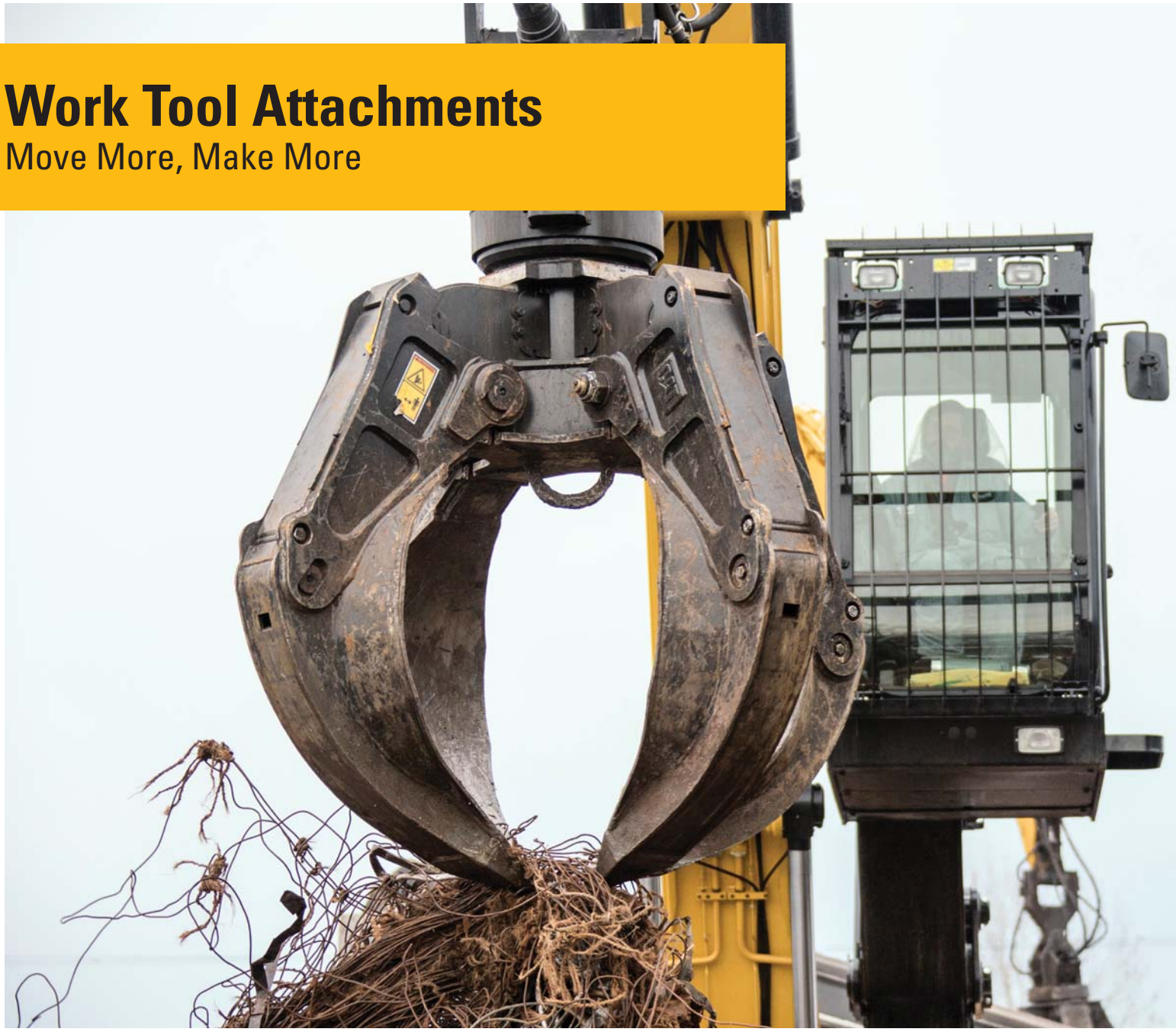
Major structures and components of the MH3027 are designed to be rebuilt, to extend the life of your machinery. The remanufactured and rebuilt parts help to reduce waste, operating cost and impact to the environment.

Efficiency

The combination of an efficiently designed hydraulic system and a market proven efficient engine work together on the MH3027 to provide excellent fuel economy and still deliver the power you need.

Work Tool Attachments

Move More, Make More



Optional 15 kW Cat Generator with Solid State Controller

If your work tool or application needs additional power for operation, the MH3027 can come equipped with an optional 15 kW solid state generator. Experience enhanced sorting ability through the proprietary solid state generator control. The genset is capable of producing enough power to operate a 1.4-1.7 m (57-66") diameter magnet. The optional solid state genset would be housed in the upper frame for ease of maintenance without obstructing other machine components.

With the operator friendly material sorting control enables the machine operator to turn the magnet current on and off at quick intervals without initiating the actual “drop” or “reverse current” cycle of the magnet which completely and quickly cleans the material off of the magnet during normal production handling.

This proprietary generator system is designed, sold and serviced by Caterpillar and Cat dealers worldwide.

Attachment Solutions for Scrap Recycling and Waste Handling and Recycling

When productivity, reliability and stability are important, Cat Work Tools are the perfect solution for the MH3027. Choose a Cat attachment for your Cat machine for maximum performance.

Productive and Perfectly Matched

Loading and unloading is foundational to your productivity. Grapples are sized right for the MH3027. They are designed for maximum penetration into the pile. The full power of your machine is utilized to provide fast open/close times and powerful closing force. Full, 360° rotation systems allow precise placement. Together, an MH3027 and Cat grapple allow you to move volumes with minimal time and effort.

Built for Severe Material

Cat grapples are built to take on the material you move. Hydraulic components are protected from damage, yet easily accessed for routine maintenance. Areas that dig and penetrate are made of high quality, wear resistant material to keep them in working condition. Components that pivot and move are engineered to the latest standards for a long life. Cat grapples last for a positive impact to your bottom line.

Orange Peel Grapples

The perfect solution for scrap yards, recycling plants and transfer stations. These grapples are available with 4 or 5 tines, in capacity of 0.57 m^3 (0.75 yd^3). Several shell choices allow further customization of your grapple to the specific material you work with.

Demolition and Sorting Grapples

Demolition and Sorting grapples are a key work tool for salvage, recycling, and waste operations. Customers will see reduced labor time, transportation costs, and landfill fees. The 360 degree rotation provides better load control as compared to fixed grapples. Rotation allows the grapple to handle and move material without moving the machine which assures less wear and tear on the undercarriage, and helps protect your customer's machine investment.

Contact your local Cat dealer to learn more about the specific grapple choices available in your region.

MH3027 Wheel Material Handler Specifications

Engine

Engine Model	Cat C7.1 ACERT	
Emissions	Tier 4 Final/Stage IV	
Net Power (ISO 14396)	129 kW	173 hp
Net Power (ISO 14396) (Metric)		175.4 hp (PS)
Bore	105 mm	4.1"
Stroke	135 mm	5.3"
Displacement	7.0 L	428 in^3
Cylinders	6 in-line	
Maximum Torque @ 1,400 rpm	0.87 kN·m	621 lbf-ft

Weights

Operating Weight (without work tool attachment)	29 651 kg	65,370 lb
Boom (long)	2520 kg	5,556 lb
Boom (short)	2250 kg	4,960 lb
Stick	1220 kg	2,690 lb
Counterweight	3615 kg	7,670 lb

Hydraulic System

Controls	Electro/hydraulic pilot controls	
Tank Capacity	163 L	43 gal
System Capacity	474 L	125 gal

Hydraulic System: Maximum Pressure

Implement Circuit	32 750 kPa	4,750 psi
Travel Circuit	32 750 kPa	4,750 psi
Auxiliary Circuit		
Medium Pressure		
Factory Setting	16 892 kPa	2,450 psi
Maximum Allowable Relief Setting	17 237 kPa	2,500 psi
High Pressure		
Factory Setting	32 750 kPa	4,750 psi
Maximum Allowable Relief Setting	32 750 kPa	4,750 psi
Swing Circuit	37 990 kPa	5,510 psi
Fan Circuit	21 400 kPa	3,104 psi

Hydraulic System: Maximum Flow

Implement Circuit	360 L/min	96 gal/min
Swing Circuit	127.6 L/min	33.7 gal/min
Fan Circuit	32.8 L/min	8.7 gal/min
Operating Temperature	60-73° C	140-164° F

Swing Mechanism

Swing Speed	7.9 rpm	
Swing Torque	74.6 kN·m	55,000 lbf-ft
Swing System	Closed loop hydrostatic system with electro-proportional controls	
Maximum Swing Pump Flow	136 L/min	36 gal/min

Transmission

Maximum Travel Speed	20 km/h	12.4 mph
Creeper Speed	5 km/h	3.1 mph
Maximum Gradeability	35% or 19 degrees	

Service Refill Capabilities

Fuel Tank	416 L	110 gal
Diesel Exhaust Fluid Tank	22.71 L	6.0 gal
Cooling System	39 L	10.3 gal
Engine Crankcase with Filter	18.5 L	4.9 gal
Hydraulic Tank	163 L	43 gal
Hydraulic System (including tank)	637 L	168 gal
Steering Axle	13.5 L	3.6 gal
Rear Axle	19 L	5 gal

Stabilizers

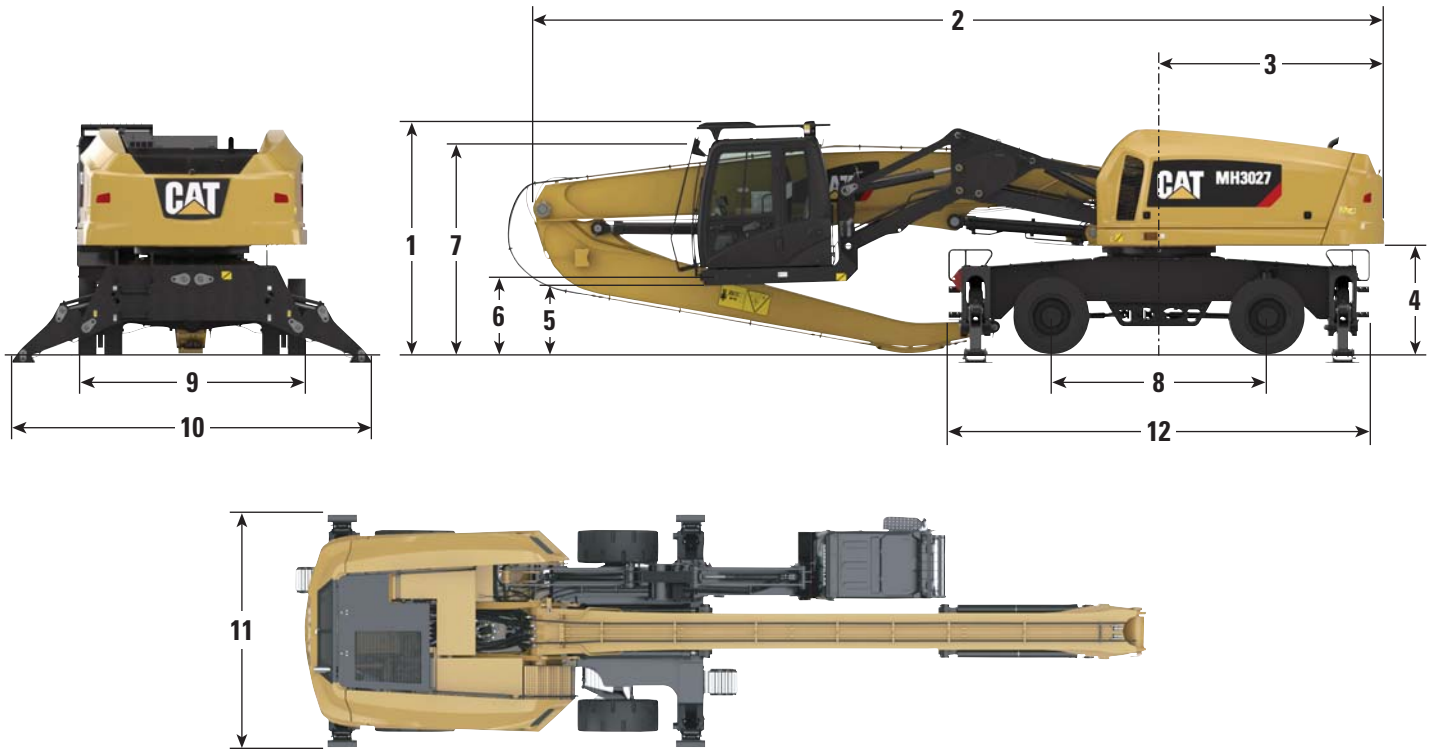
Ground Penetration	88 mm	3.5"

Undercarriage

Ground Clearance at Lowest Point	221 mm	8.7"
Oscillation Axle Angle	±3 degrees	
Minimum Turning Radius (inside)	5.0 m	16'6"

Dimensions

All dimensions are approximate.



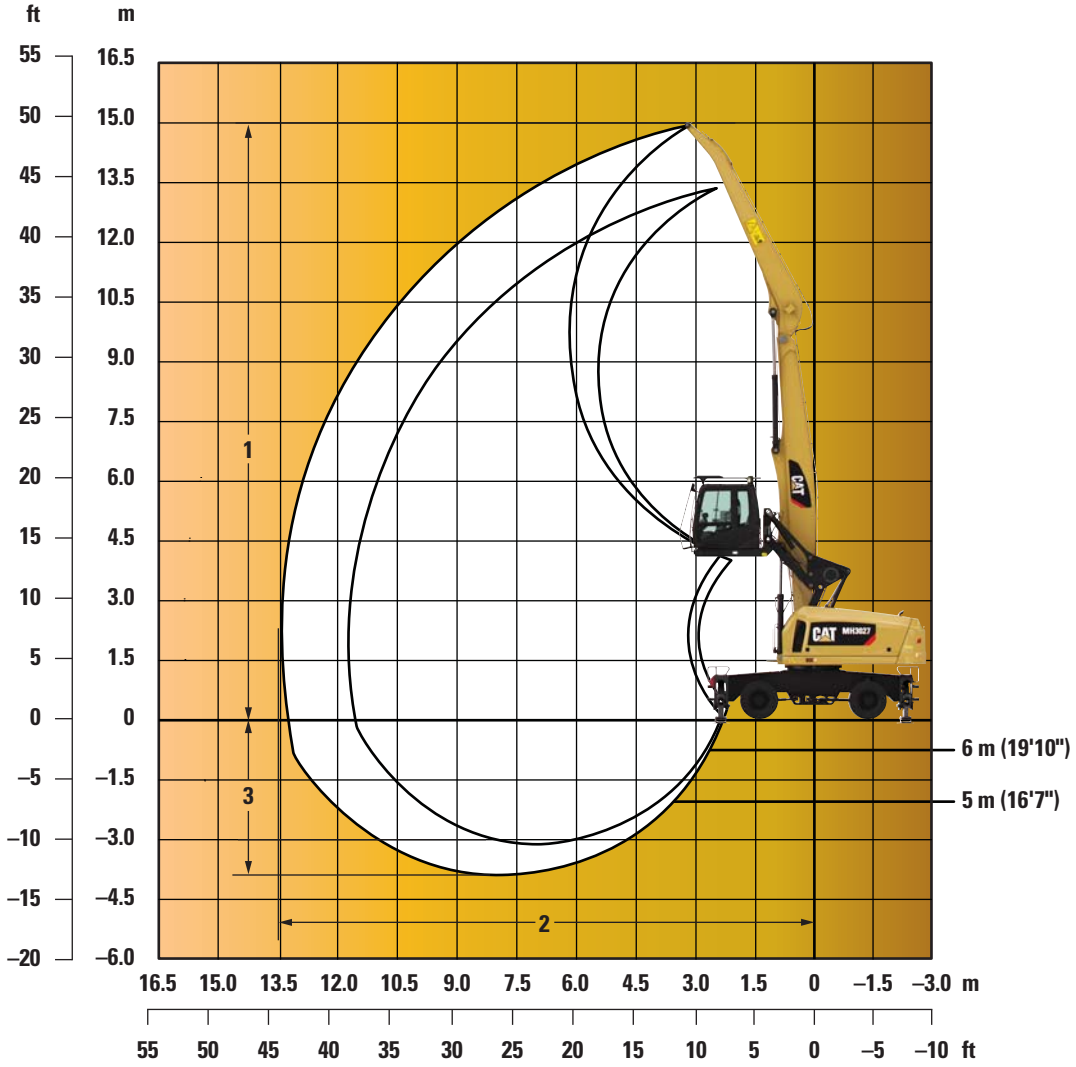
	Cab to Platform		Cab to Ground	
1 Shipping Height	3588 mm	11'9"	3173 mm	10'5"
2 Shipping Length	11 265 mm	37'0"	11 265 mm	37'0"
3 Tail Swing Radius	2934 mm	9'8"	2934 mm	9'8"
4 Counterweight Clearance	1440 mm	4'9"	1440 mm	4'9"
5 Cab Clearance – Lowered to Ground*	N/A	N/A	155 mm	6.1"
6 Cab Step Height – Lowered to Ground**	N/A	N/A	243 mm	9.6"
7 Cab Linkage Height				
Transportation	3389 mm	11'1"	3100 mm	10'2"
Raised to Top of FOGS Guard	2096 mm	82.5"	N/A	N/A
8 Wheel Base	2794 mm	9'2"	2794 mm	9'2"
9 Undercarriage Width	2950 mm	9'8"	2950 mm	9'8"
10 Outrigger Width on Ground	4693 mm	15'5"	4693 mm	15'5"
11 Shipping Width – Outriggers Up	3075 mm	10'1"	3075 mm	10'1"
12 Undercarriage Length	5732 mm	18'10"	5732 mm	18'10"

*Factory set at 155 mm (6.1") – adjustable through the operating system to be lower or higher.

**Factory set at 243 mm (9.6") – dimension varies as the cab clearance adjustment changed.

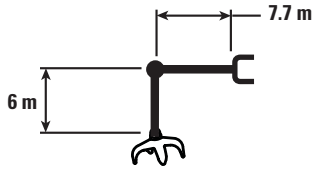
MH3027 Wheel Material Handler Specifications

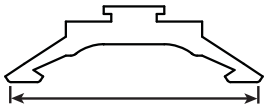
Working Ranges

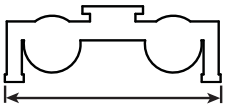


	Drop Nose Stick		Straight Stick	
Boom Length	**7.7 m**	**25'2"**	**6.7 m**	**22'1"**
Stick Length	**6 m**	**19'10"**	**5 m**	**16'7"**
1 Maximum Height	15.2 m	49'9"	13.6 m	44'9"
2 Maximum Reach	13.6 m	44'8"	11.9 m	38'11"
3 Maximum Depth	3.9 m	13'0"	3.0 m	10'0"

Lift Capabilities – Drop Nose Stick







			3.0 m		4.5 m		6.0 m		7.5 m		9.0 m		10.5 m		12.0 m				
																			m
13.5 m	A	kg					*7678	6549									*1868	4527	7.3 m
	B						*7678										*4868		
12.0 m	A	kg					*7270	6907	5580	4657							3636	2968	9.3 m
	B						*7270		*6307								*4572		
10.5 m	A	kg							5707	4780	4078	3373	2943	2377			2808	2257	10.7 m
	B								*6127		*5455		*4806				*4195		
9.0 m	A	kg							5692	4766	4094	3388	3017	2449			2348	1859	11.7 m
	B								*6111		*5414		*4842				*4125		
7.5 m	A	kg					*7250	6821	5555	4634	4013	3310	2988	2421	2241	1767	2024	1575	12.5 m
	B						*7250		*6237		*5469		*4844		*4278	4205	*3908	3875	
6.0 m	A	kg					*7700	6435	5302	4389	3855	3156	2897	2332	2209	1736	1835	1409	13.0 m
	B						*7700		*6482		*5589		*4885		*4270	4170	*3820	3588	
4.5 m	A	kg			*10 762	9370	7132	5855	4946	4045	3637	2944	2764	2202	2137	1665	1683	1273	13.4 m
	B				*10 762		*8310		*6791		*5736		*4932		*4250	4093	*3549	3362	
3.0 m	A	kg	*12 394		9952	7918	6392	5147	4531	3644	3386	2699	2609	2050	2047	1577	1595	1193	13.6 m
	B				*12 090		*8906		*7071		*5851		*4947		*4190	3995	*3288	3239	
1.5 m	A	kg	*2171		8514	6571	5680	4466	4125	3251	3137	2457	2454	1900	1955	1486	1560	1159	13.6 m
	B				*11 782		*9216		*7197		*5864		*4878	4792	*4050	3896	*3030		
0.0 m	A	kg	*2425		*6614	5751	5148	3957	3793	2930	2926	2252	2320	1768	1877	1410	1557	1152	13.5 m
	B				*6614		*9028		*7052		*5698		*4672	4646	*3775		*2657		
–1.5 m	A	kg			*6261	5403	4838	3660	3571	2716	2776	2105	2225	1676	1829	1363	1653	1226	12.9 m
	B				*6261		*8280		*6560		*5288		*4263		*3295		*2574		
–3.0 m	A	kg					4714	3542	3462	2610	2698	2030	2183	1634			1999	1493	11.2 m
	B						*7004		*5675		*4566		*3573				*3100		

* ISO 10567

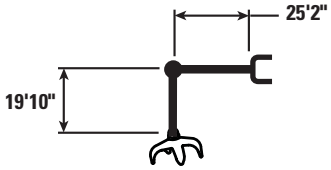
Capacities marked with an asterisk (*) are limited by hydraulic capacity rather than tipping load. Lifting capacities shown should not be exceeded. Weight of the grapple, magnet, and all lifting accessories must be deducted from the above lifting capacities. Lifting capacities are based on the machine standing on a firm uniform level supporting surface. User must make allowances for job condition such as soft or uneven ground. Lifting capacities shown do not exceed 75% of minimum tipping loads or 87% of hydraulic capacity. Least stable position is over the side. Capacities apply only to the machine as originally manufactured and normally equipped by the manufacturer. Total weight of the machine is 29 651 kg equipped with a 13.6 m boom. Weight does not include the grapple, magnet, or attaching hardware. Lift capacities are in compliance with ISO 10567 and SAE J2518 "Lift Capacity Calculation Method – Scrap and Material Handlers."

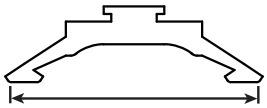
Operator should be fully acquainted with the Operator's Manual and the Operating Safety Manual furnished by the manufacturer before operating the machine.

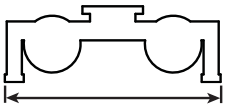
A = Wheels
B = Outrigger

MH3027 Wheel Material Handler Specifications

Lift Capabilities – Drop Nose Stick







			10.0 ft		15.0 ft		20.0 ft		25.0 ft		30.0 ft		35.0 ft		40.0 ft				ft/in
45.0 ft	A	lb					*14,341	13,857									*11,108	10,860	22'9"
	B						*14,341										*11,108		
40.0 ft	A	lb					*15,964	14,756	11,885	9,903							8,334	6,816	29'10"
	B						*15,964		*13,848								*10,183		
35.0 ft	A	lb							12,218	10,225	8,694	7,176					6,341	5,105	34'8"
	B								*13,400		*11,927						*9,297		
30.0 ft	A	lb							12,218	10,226	8,765	7,244	6,424	5,200			5,205	4,121	38'3"
	B								*13,325		*11,806		*10,550				*8,763		
25.0 ft	A	lb					*15,762	14,686	11,946	9,962	8,613	7,096	6,389	5,166	4,754	3,731	4,482	3,490	40'11"
	B						*15,762		*15,762		*11,900		*10,534		*9,263	8,985	*8,415		
20.0 ft	A	lb					16,678	13,876	11,416	9,449	8,286	6,778	6,209	4,989	4,711	3,689	4,023	3,085	42'9"
	B						*16,698		*16,697		*12,140		*10,606		*9,240	8,939	*8,388	7,874	
15.0 ft	A	lb			*23,248	20,256	15,391	12,644	10,662	8,719	7,825	6,329	5,932	4,718	4,570	3,550	3,706	2,803	44'0"
	B				*23,248		*17,996		*14,725		*12,443		*10,694		*9,185	8,787	*7,815	7,404	
10.0 ft	A	lb	*26,000		21,511	17,149	13,806	11,127	9,773	7,860	7,289	5,808	5,604	4,398	4,384	3,368	3,510	2,625	44'8"
	B				*26,124		*19,278		*15,322		*12,680		*10,710	10,674	*9,035	8,587	*7,235	7,130	
5.0 ft	A	lb	*5,132		18,394	14,224	12,267	9,653	8,898	7,013	6,756	5,289	5,274	4,076	4,193	3,181	3,434	2,550	44'8"
	B				*26,240		*19,961		*15,590		*12,695		*10,544	10,314	*8,703	8,381	*6,663		
0.0 ft	A	lb	*5,523		*15,326	12,418	11,108	8,543	8,180	6,319	6,302	4,846	4,991	3,798	4,034	3,024	3,446	2,551	44'2"
	B				*15,326		*19,563		*15,270		*12,322		*10,070	10,004	*8,065		*5,953		
–5.0 ft	A	lb			*14,290	11,643	10,429	7,894	7,699	5,853	5,980	4,533	4,792	3,603	3,940	2,933	3,662	2,716	42'2"
	B				*14,290		*17,938		*14,185		*11,404		*9,142		*6,943		*5,750		
–10.0 ft	A	lb					10,160	7,637	7,465	5,627	5,817	4,374	4,708	3,522			4,407	3,290	36'9"
	B						*15,131		*12,223		*9,787		*7,570				*6,767		

* ISO 10567

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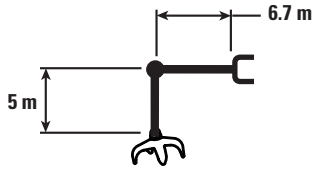
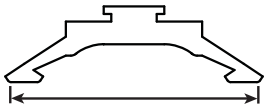
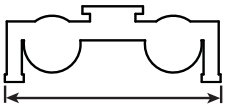
A = Wheels

B = Outrigger

Lift Capabilities – Straight Stick







			3.0 m		4.5 m		6.0 m		7.5 m		9.0 m		10.5 m				
																	m
12.0 m	A	kg			*9950	9938	*6980	5945							*5508	5220	6.4 m
	B				*9950		*6980								*5508		
10.5 m	A	kg					7633	6333	5069	4163					3980	3219	8.4 m
	B						*7650		*6700						*4121		
9.0 m	A	kg					7724	6421	5189	4280	3629	2936			3047	2425	9.7 m
	B						*7437		*6489		*5763				*3687		
7.5 m	A	kg					7617	6318	5140	4233	3649	2956	2613	2055	2549	1998	10.6 m
	B						*7535		*6506		*5709		*4982		*3636		
6.0 m	A	kg					7318	6032	4968	4066	3564	2873	2618	2060	2205	1699	11.3 m
	B						*7916		*6684		*5759		*4966		*3086		
4.5 m	A	kg			*10 976	8988	6836	5572	4699	3805	3413	2726	2550	1993	2024	1541	11.7 m
	B				*10 976		*8500		*6952		*5850		*4948	4897	*3151		
3.0 m	A	kg			9820	7794	6240	5002	4375	3492	3229	2546	2452	1897	1922	1450	11.9 m
	B				*12 358		*9089		*7196		*5907		*4878	4790	*3228		
1.5 m	A	kg			8656	6703	5670	4457	4059	3187	3046	2368	2353	1800	1892	1420	11.9 m
	B				*12 985		*9368		*7263		*5834		*4684	4681	*3356		
0.0 m	A	kg	*3378		7974	6065	5258	4062	3809	2946	2898	2224	2276	1725	1329	1448	11.7 m
	B				*9865		*9070		*7002		*5526		*4267		*2917		
–1.5 m	A	kg			7720	5827	5039	3853	3659	2801	2809	2138	2244	1694	2158	1627	10.8 m
	B				*9207		*8087		*6289		*4862		*3473		*3133		
–3.0 m	A	kg					4990	3806	3617	2760					3187	2429	8.2 m
	B						*6400		*5017						*4401		

* ISO 10567

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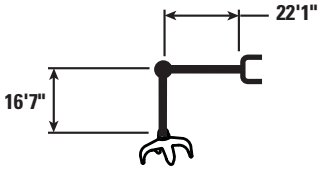
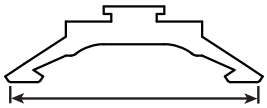
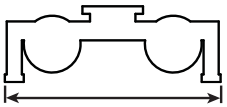
A = Wheels
B = Outrigger

MH3027 Wheel Material Handler Specifications

Lift Capabilities – Straight Stick







			10.0 ft		15.0 ft		20.0 ft		25.0 ft		30.0 ft		35.0 ft				ft/in
40.0 ft	A	lb			*21,407	21,118	*12,804	12,462							*12,536	12,354	20'1"
	B				*21,407		*12,804								*12,536		
35.0 ft	A	lb					16,308	13,522	10,758	8,813					9,232	7,488	26'10"
	B						*17,240		*15,060						*10,222		
30.0 ft	A	lb					16,565	13,768	11,101	9,145	7,703	6,211			6,896	5,500	31'5"
	B						*16,700		*14,648		*13,070				*8,873		
25.0 ft	A	lb					16,369	13,581	11,030	9,075	7,801	6,306			5,685	4,461	34'7"
	B						*16,870		*14,650		*12,914				*8,404		
20.0 ft	A	lb					15,752	12,990	10,679	8,736	7,639	6,149	5,581	4,375	4,942	3,817	36'10"
	B						*17,670		*15,015		*13,004		*11,240	10,649	*7,956		
15.0 ft	A	lb			23,917	19,406	14,735	12,016	10,112	8,187	7,327	5,845	5,454	4,251	4,501	3,431	38'3"
	B				*24,243		*18,934		*15,590		*13,193		*11,192	10,511	*7,885		
10.0 ft	A	lb			21,197	16,854	13,459	10,795	9,421	7,519	6,938	5,466	5,255	4,057	4,269	3,224	38'11"
	B				27,281		*20,226		*16,120		*13,310	13,270	*11,025	10,294	*8,234		
5.0 ft	A	lb			18,671	14,485	12,229	9,617	8,742	6,862	6,549	5,087	5,050	3,856	4,179	3,138	39'0"
	B				*28,743		*20,862		*16,272		*13,140	12,837	*10,574	10,069	*7,960		
0.0 ft	A	lb	*8,093		17,171	13,077	11,331	8,757	8,204	6,342	6,234	4,780	4,892	3,702	4,261	3,198	38'4"
	B				*23,315		*20,239		*15,701		*12,446		*9,605		*7,005		
–5.0 ft	A	lb			16,604	12,545	10,854	8,301	7,882	6,030	6,049	4,600	4,839	3,650	4,839	3,650	35'0"
	B				*21,450		*18,097		*14,125		*10,950		*7,733		*7,733		
–10.0 ft	A	lb					10,751	8,202	7,798	5,949					8,474	6,469	23'7"
	B						*14,369		*11,285						*9,252		

* ISO 10567

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A = Wheels
B = Outrigger

Standard Equipment

Standard equipment may vary. Consult your Cat dealer for details.

ELECTRICAL

- 24V, 95 amp alternator
- Battery disconnect switch (ground level access)
- Circuit breakers
- Lock out tag out disconnect
- Cat data link with capability to use Electronic Technician
- Engine emergency shutdown switch (ground level access)
- Two 12V, 1,000 CCA batteries
- Jumpstart receptacle (ground level access)
- Rear vision camera
- Signaling/warning horn
- Travel alarm (both forward and reverse) – ability to disable
- Cab to ground movement alarm

HYDRAULICS

- Electro hydraulic controls
- Cab emergency lowering valve (in-cab and ground level) ball valve
- Boom and stick and stabilizer load lock valve
- Individual stabilizer controls
- Single main implement hydraulic pump
- Dedicated hydraulic swing pump
- Hydraulic swivel with electric slip ring
- Automatic swing brake
- Cat Advanced HYDO™ 10 hydraulic oil
- Auto lube for upper
- Greaseless bearings for cab riser
- Centralized manual lube for lower
- Cooling arrangement – auto reversing

OPERATOR ENVIRONMENT

- AM/FM radio with USB/Bluetooth/J1939
- Heated air suspension seat with headrest, three point operator restraint with retractable 76 mm (3") seat belt
- Right and left machine function keypads
- Skylight with sunshade
- Travel control pedal
- Bi-level air-conditioner, heater and defroster
- Positive filtered ventilation
- Rear window – removable from outside or inside of cab and serves as an alternate exit
- Machine control display monitor
- Camera display for rearview camera (capable of two camera installation)
- Engine start switch
- Ground access hydraulic cab riser system
- Hydraulic lock out and control lever

POWER TRAIN

- 129 kW (173 hp) at 1,850 rpm Cat C7.1 ACERT diesel engine meets Tier 4 Final/ Stage IV emission standards
- 2300 m (7,546 ft) altitude capability with no de-rate
- Fuel filter with fuel water separator with water level sensor
- Two stage engine air cleaner with built-in high efficiency cyclone precleaner, primary and safety elements with dust indicator
- Side-by-side cooling system with radiator, charge air cooler and hydraulic oil cooler in single plane
- Variable speed hydraulic fan drive
- Auto engine idling mode
- Auto engine shutdown mode
- Cat emissions module with diesel exhaust fluid system
- Ether intake manifold port
- Accommodates up to B20 biofuel
- Two speed travel

UNDERCARRIAGE

- Four simultaneously controlled stabilizer legs
- Lockable oscillating rear axle

OTHER STANDARD EQUIPMENT

- Hydraulic warm up valve
- Hydraulic tank and fuel tank caps – lock ready
- S·O·S℠ quick sampling valves for engine oil, coolant and hydraulic oil
- Upper ladder and handrails for access/ egress to platform
- Cab positioning system (cab to lower position display)
- Cat Product Link (PLE641)
- Rearview camera
- Tires, solid rubber super single
- Cab work tool avoidance
- 15.9 m (52 ft) front boom and stick

MH3027 Optional Equipment

Optional Equipment

Optional equipment may vary. Consult your Cat dealer for details.

- 14.4 m (47 ft 4 in) front boom and stick
- LED stick lights
- LED cab lights, no guard
- LED cab lights
- Tires, solid rubber dual
- Right side camera
- Cat Advanced Bio HYDO 10 oil
- Guards, front
- Guards, falling objects
- 15 kW generator
- 120V AC hydraulic tank heater (Tier 4 only)
- Auxiliary keypad for customer installed electrical components

Field Installed Optional Equipment

Optional equipment may vary. Consult your Cat dealer for details.

- Ether start aid attachment
- Reflective film – cab

Notes

For more complete information on Cat products, dealer services, and industry solutions, visit us on the web at **www.cat.com**

AEHQ7731-01 (03-2016)
Replaces AEHQ7731

Materials and specifications are subject to change without notice. Featured machines in photos may include additional equipment. See your Cat dealer for available options.