

Cat[®] WAVS

Work Area Vision System



Improving jobsite vision increases safety—and productivity.

Caterpillar engineers designed the Cat[®] Work Area Vision System (WAVS) to improve an equipment operator's view of busy jobsites. With options featuring up to four robust, external closed-circuit cameras and an in-cab-mounted display monitor, Cat WAVS enhances an operator's awareness of the site surroundings, work tool activities and changes in work area conditions—increasing safety and productivity.

Depending on equipment size, worksite environment and application, you can select precisely the WAVS options you need. Whether that's one or two cameras for smaller machines operating in lighter duty applications, or up to four cameras to maximize visibility of your larger equipment in the most rugged applications.





Add Extra “Eyes” on Jobsites with WAVS

Easy Installation and Integrated Operation

For Cat machines and your entire fleet, installation of the one, two, three or four camera WAVS options is quick and easy with any 12-volt or 24-volt DC system. Its closed-circuit camera system is integrated into equipment, so WAVS automatically prompts each camera based on machine motion to send the appropriate view to the display monitor. For example, when an operator shifts into reverse, the camera with a rear view of the machine automatically appears on the display.

Rugged Camera Features Reduce Blind Spots

WAVS does not replace mirrors, but it does help take the guess work out of machine surroundings for operators. They can quickly position each camera to view blind spot locations, which reduces machine incidents that can result from poor visibility. Or, they can focus a camera’s lens on specific areas to improve productivity. Each camera features a robust design that withstands 15Gs of vibration and protection from high-pressure washing. Other notable camera features include:

- Internal heater for removal of condensation, snow and ice for continuous visibility
- Chemically hardened glass, which prevents breakage, scratches and damage
- “Eyeball” design that makes adjusting lens position easy and versatile, with no vertical or horizontal bracket limitations
- Panoramic 115° and Narrow 78° views so operators see much more of the work area and more detail



Clear, Bright Cab Monitor Improves Jobsite Vision

With its 7" Thin Film Transistor (TFT) liquid crystal display with LED backlighting, WAVS increases operator visibility of the jobsite, which means safety and productivity increase too. The clear, easy-to-see image on the cab's display monitor also offers ergonomic benefits for operators. The display features:

- Wide video graphics array (WGVA) resolution for sharper images and clear viewing
- Aspect ratio of 16:9 for a wider viewing area
- Resistance to water, splashes and other moisture
- Automatic brightness control that senses and adjusts to changing light conditions
- Full on-screen display functionality in 13 languages* for global use
- Easy to navigate menu structure for intuitive operation
- Built-in power protection against induction voltages, load dumps, and over and under voltage
- Caterpillar tested and validated for heavy duty applications

* English, Dutch, German, French, Italian, Polish, Portuguese, Spanish, Turkish, Swedish, Finnish, Danish and Norwegian.



WAVS Options to Fit Your Entire Fleet

With three Cat WAVS options designed for different machine and application needs, you can improve visibility for all of your fleet's operators.

- **CUSTOM SYSTEM**—includes a core system with your choice of up to four cameras. You follow 4 easy steps to order other system components, like cable length—for a truly custom fit to your machine.
- **STANDARD KIT**—a convenient, pre-packaged kit with your choice of up to four cameras that includes the key standard parts you need.
- **LIGHT DUTY KIT**—a cost-effective, one- or two-camera kit designed with specifications for your smaller machines that operate in less demanding applications.



Custom System

4 Easy Steps for Ordering Your Custom System

Step 1: Select the Core System You Need

CORE SYSTEMS	PART NUMBER	PACKAGE CONTENTS
1 Camera	353-5450	1 camera, and display with harness and 4 meter cord
2 Cameras	353-5451	2 cameras with camera switcher, and display with harness and 4 meter cord
3 Cameras	353-5452	3 cameras with camera switcher, and display with harness and 4 meter cord
4 Cameras	368-1449	4 cameras with camera switcher, and display with harness, 4 meter cord and two bulkhead connectors

Your core system also requires a cable to run from the display to each camera, a display mount and camera bracket(s), which you order separately to ensure a perfect fit for your specific machine and application.

Step 2: Choose Your Cable Preferences

With a custom system, you order the cable length you want to run from the display to each camera, which means you don't end up buying more cable than you need, and you won't have to hide any leftover cable. You also select the type of cable that's ideal for your equipment and application. We offer a 9 mm armored cable option that is double jacketed and double shielded for extra protection in the most demanding work environments, as well as a 6 mm non-armored cable.

CABLE LENGTH	CABLE PART NUMBER	
	9mm Armored	6mm Non-Armored
3.28 feet (1 meter)	-	320-9715
9.8 feet (3 meters)	283-0657	261-3223
16.4 feet (5 meters)	274-4477	251-8248
24.6 feet (7.5 meters)	283-0658	266-2116
29.5 feet (9 meters)	283-0659	-
36 feet (11 meters)	274-4478	251-4169
52.5 feet (16 meters)	274-4479	271-7453
68.9 feet (21 meters)	-	251-8249

Step 3: Select Your Display Mount

When ordering a WAVS custom system, you also need to select the type of display mounting you want for your specific machine and application.

	PACKAGE CONTENTS	PART NUMBER
	259-4397	3.5" Ram Mount
	259-4398	Studded (3/8") Ram Mount Ball
	259-4399	Ram Mount Ball Base
	259-4400	3.5" Ram Mount, Studded Ball (3/8") and Ball Base
	261-3222	3.5" Ram Mount, 2 Ball Bases
	270-3311	5.75" Ram Mount
	271-7455	Double Ball Connector

261-3222 contains (1) 259-4397 and (2) 259-4399 and is our most popular mount. Other mounts shown on the chart are also available.

Step 4: Choose Your Camera Bracket(s)

The final step in ordering your custom system is to choose the camera bracket you prefer for each camera from the three available options. You can mix and match brackets to suit your machine and camera placement needs.



305-3748



248-6979



290-0106

Standard Kit Options

Standard WAVS kits with up to four cameras are also available. The pre-packaged kits include the number of cameras ordered, complete with a camera bracket (model 276-2638) and 16 meters of armored camera cable for each. A kit also includes the in-cab display with a mount (model 261-3222), harness and 4 meter cord, as well as a switch when you order a standard kit with more than one camera.

STANDARD KIT OPTIONS	PART NUMBER
1 Camera	282-4441
2 Cameras	282-4442
3 Cameras	282-4443

Light Duty Kits for Less Severe Applications

Caterpillar designed the WAVS Light Duty Camera system with similar looks and functionality to the standard WAVS product. With specifications ideally suited for small, 12-volt wheeled machines that don't operate in harsh ground conditions, Light Duty costs less than standard WAVS.

Its display features the same functions as the standard WAVS product display, so there's no learning curve if you use a combination of light and standard duty WAVS products for your entire fleet. WAVS Light Duty kits also use the same cables as standard WAVS products. Light Duty kits are offered in these one or two camera configurations.

STANDARD KIT OPTIONS	PART NUMBER	KIT CONTENTS
1 Camera	377-9894	1 camera and an 11 meter cable, and display with mount, harness and 1.8 meter cord
2 Cameras	379-0069	2 cameras with two 11 meter cables, camera switcher, and display with mount, harness and 1.8 meter cord

Optional WAVS Parts

If you want to install an external toggle switch into the dash, route camera cable through a sealed cab with a bulkhead connector, or install a camera bracket onto the machine, these WAVS parts are available for order.

STANDARD KIT OPTIONS	PART NUMBER
Alternate Camera Switch	275-5858
Plug Kit (for 275-5858 switch)	245-7434
Adapter (for 275-5858 switch)	236-4631
Horizontal Bracket Assembly	258-7484
Connector-Video Bulkhead (also for WAVS Light Duty)	333-8153
5 mm x 12 mm Bolts (package of 4)	8T-0288
5 mm Flat Washers (package of 4)	4B-4274

WAVS Camera Wash System

For optimum operator viewing of camera images on the display, Caterpillar recommends ordering the WAVS Camera Wash System. It is the only Caterpillar designed system available to clean Cat WAVS cameras. (Part number: 307-3005)

CAT DEALERS DEFINE WORLD-CLASS PRODUCT SUPPORT.

We offer you the right parts and service solutions, when and where you need them.

The Cat Dealer network of highly trained experts keeps your entire fleet up and running to maximize your equipment investment.

