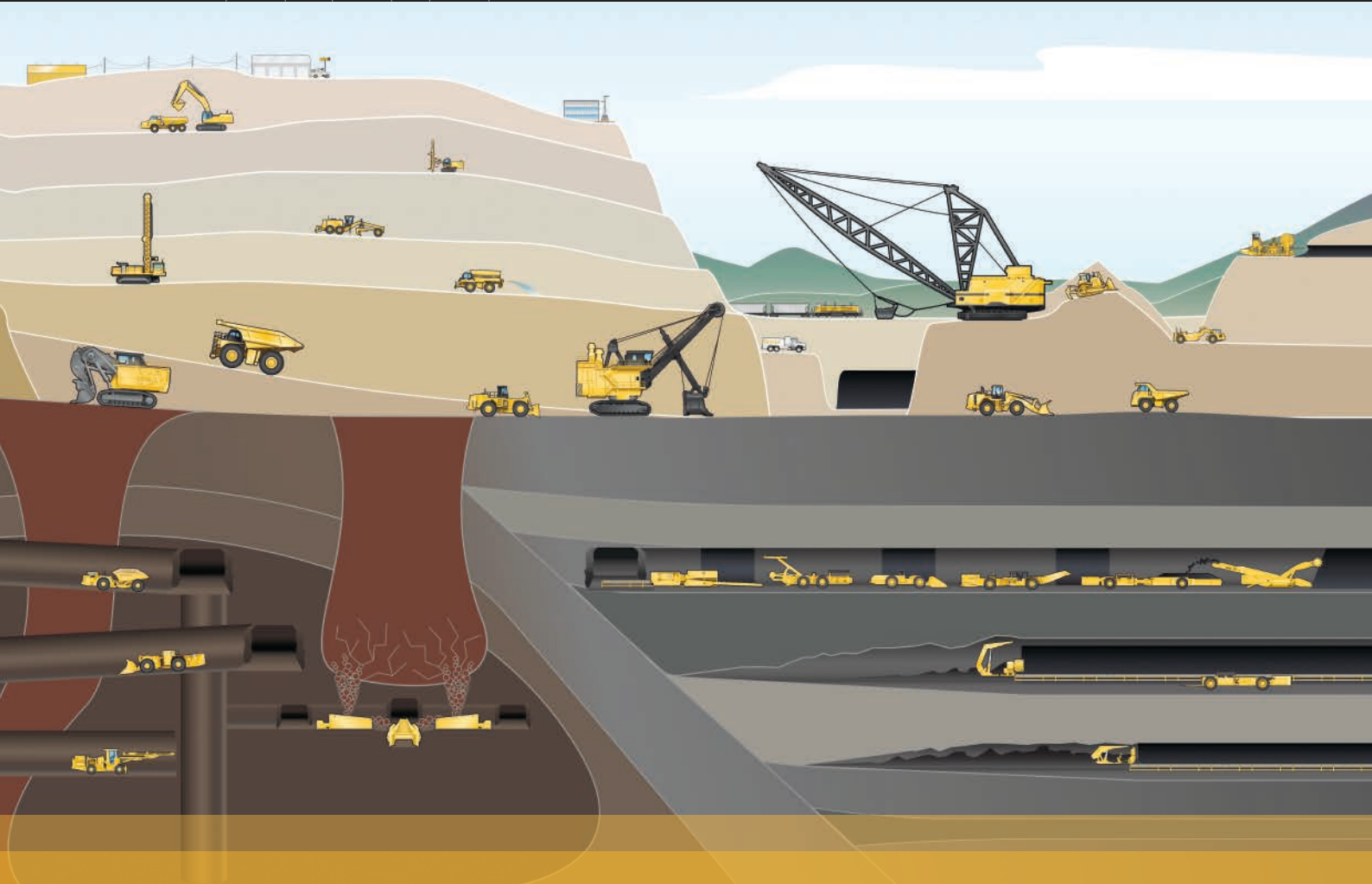




CAT[®] HYDRAULIC HOSE SOLUTIONS for Mining



A PERFECT CONNECTION

DISCOVER THE VALUE OF USING CAT[®] HYDRAULIC HOSE PRODUCTS



When it comes to hydraulics, you want the safest and most reliable components on your machine.

THAT'S WHY CATERPILLAR OFFERS SUPERIOR HOSE SOLUTIONS

5 Reasons to Choose Cat Hose Assemblies

UNRIVALED EXPERTISE

RUGGED DESIGN

METICULOUS MANUFACTURING

SAFETY MINDSET

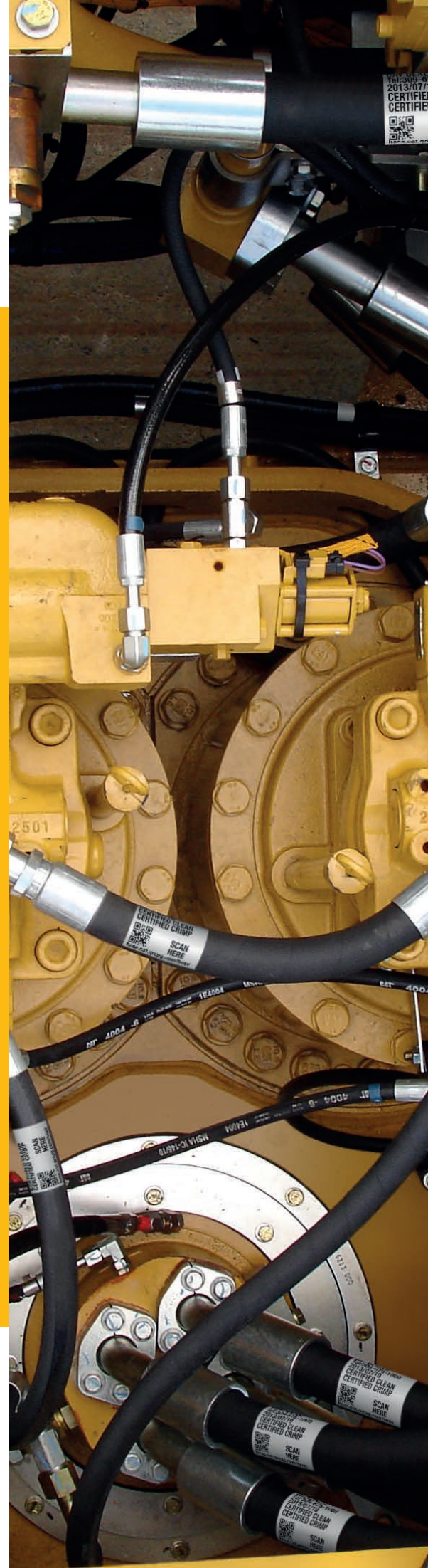
Rigorous Testing
Cat Standards Compliance

UNMATCHED SUPPORT

Expert Installation
Hardware & Software Combination
Test Bench
Hydraulic Information System
Hose Labeling
On-site Mobile Hose Shop

Learn how each advantage delivers genuine value, to help you get the most out of your hydraulic systems—driving greater efficiency on your job site and more value to your bottom line.

Caterpillar is the only worldwide equipment manufacturer that designs and produces hose assemblies for its machines



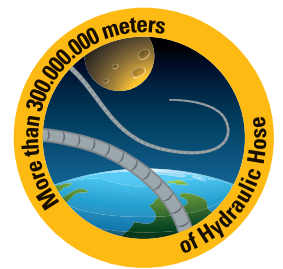
UNRIVALED EXPERTISE that instills confidence

A COMPANY YOU
CAN COUNT ON
When it comes
to operating your
Cat equipment,
dependability is a
must. That is why
we manufacture our
own line of hydraulic
hose and couplings
for your replacement
hydraulic hose
assemblies. In fact,
no other equipment
manufacturer is
more invested in this
business.



A Longer History of Know-How to Help You

When you rely on Cat hydraulic components, you have half a century of expertise behind you. Caterpillar began designing and manufacturing hose products in the 1960s to meet the high-pressure hydraulic needs of a growing construction market. Since that time – over several decades – our hydraulic hose and couplings have earned and maintained a global reputation for superior performance and reliability.



Caterpillar entered the hose business in the 1960s primarily out of necessity. The company needed a high-pressure hose that would meet increased productivity demands in the earth-moving industry. However, no such hose was available. In 1968, Caterpillar designed, tested and began manufacturing its own High Pressure Spiral Hose.



By the 1970s, Caterpillar was a leading manufacturer of high-pressure hose and coupling products, and the company's innovative Cat Spiral Hose had become the industry standard for high-pressure applications. Since that time, Caterpillar has never waived from the hose and coupling business.

RUGGED DESIGN for endurance in tough applications

A UNIQUE SYSTEM APPROACH

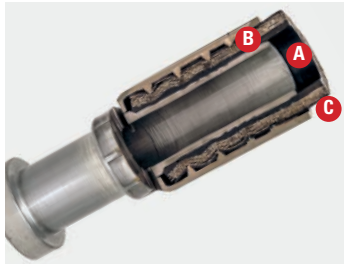
Cat hose assembly products and tooling are designed to work together as a coordinated system. This is the only way to achieve a reliable connection that helps optimize hydraulic system safety and dependability.



Cat Hydraulic Hose Is Durable and Flexible

The complete offering includes high pressure, low and medium pressure, and specialty hoses that meet a wide range of application requirements.

Every hose is engineered to surpass industry standards.



A. The inner liner and cushion stock of the hose are made from high-quality rubber formulas proprietary to Caterpillar and are fully compatible with CAT fluids.

B. Spiral or braided wire reinforcement is added for strength to surpass pressure requirements.

C. Then a tough outer cover is applied to resist oil, weather, abrasion and is designed to meet the MSHA* flame test requirements.

* Mining Safety & Health Administration



When extreme abrasion resistance is needed, Caterpillar offers another option.

Cat XT ToughGuard™ Hose has an exclusive, Caterpillar designed polyethylene cover that surpassed two million abrasion test cycles without failure. Not only are these hoses superior against abrasion, but they are also highly resistant to chemicals and weathering and they eliminate the need for nylon, plastic, and other forms of hose protection in most applications which can significantly reduce material and labor costs.



Formulated for Unmatched Flexibility

Cat hydraulic hoses are designed to work at half of the SAE bend radius without sacrificing extreme cold temperature flex capability or durability. This enables easier routing in the tightest spaces.

An Integrated System fully aligned to

MDG 41 SAFETY SOLUTION

Machine Design Guideline 41 is an industry based response to the increased number of fluid injection and related injuries sustained in the mining sector.

MDG 41 is a guideline that defines a matched system as "where the hose and fittings are from the same manufacturer and are assembled and crimped using the method as specified by that manufacturer".



Proprietary Tooling and Software for Exact Assembly

Your Cat dealer uses Caterpillar designed tooling and industry unique software to construct every hose assembly to exact OEM specifications. This Cat exclusive tooling and software combination ensures precise crimps every time for enhanced safety and reliability.



Cat Couplings Ensure a Solid Connection

Our one-piece couplings are designed for superior coupling retention with Cat hose to withstand pressure requirements and allow flexing without fatigue. This results in the most reliable connection and eliminates potential for leaks.

Caterpillar also offers reusable couplings for large diameter high pressure hose.

METICULOUS MANUFACTURING for reliable performance

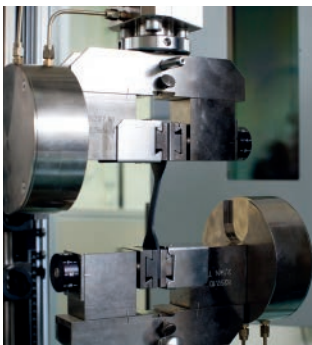
HOSE ASSEMBLIES BUILT TO EXACT CAT SPECIFICATIONS

Cat hydraulic hose assembly solutions are built to same-as-new specifications for Cat equipment. This means every dealer built hose assembly perfectly matches the factory-installed version it is replacing.



Focused on Quality

Stringent quality control processes and cleanliness control ensure consistently manufactured high-quality components. Caterpillar uses state-of-the-art machinery to produce its own medium and high pressure hose.



We apply statistical process control to verify that every batch of rubber has been mixed to our exact specifications.



Before application, the hose is routed through a cooling chamber until it reaches a suitable temperature that prevents perforation of the hose as the high tensile strength reinforcement wire is applied.



Our couplings are forged and machined from high tensile strength steel. Then they are heat treated and plated to ensure maximum durability and corrosion resistance. Salt spray testing is in accordance with ASTM B1117.



Cat hose is carefully monitored to ensure precise inner and outer diameter measurements are maintained. This provides precise coupling retention capability.

SAFETY MINDSET

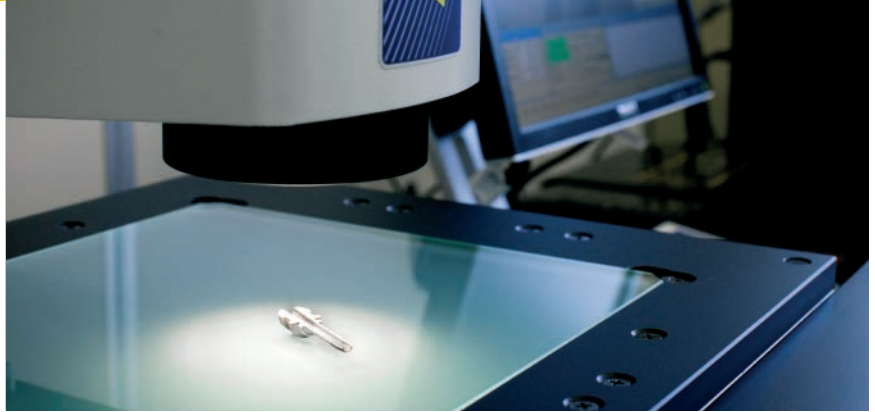
“SAFETY FIRST” APPROACH

Caterpillar is constantly developing and refining advanced technologies in order to assure the highest level of safety.

Rigorous Testing for Optimum Safety

The Best in the Industry

Cat hydraulic hose and couplings are subjected to the most rigorous testing process in the hose and coupling manufacturing industry.



An All-in-one Approach Produces the Most Reliable Results

Every Cat hose and coupling combination is tested as a system – not as separate components – to ensure a perfect fit that yields maximum safety and dependability.



Abrasion is the #1 cause of hose failure: Cat ToughGuard™ hose, designed for severe abrasion applications, features a polyethylene cover that has surpassed two million cycles of abrasion testing without failure. Tested per ISO 6945.

Comprehensive Analysis Verifies that Critical Standards Are Met or Exceeded

We use an array of measures to evaluate both raw materials and finished components. These include rubber compression and elongation testing; wire tensile-strength testing; hose impulse testing, burst pressure testing, temperature adaptability testing, abrasion testing, flexibility and diameter testing; and coupling salt-spray and metallurgical testing – all of which help ensure unparalleled hydraulics safety and dependability for your machines.



To simulate punishing conditions, Caterpillar impulse-tests hose assemblies at 2x the industry standard for impulse cycles.



Cat hose assemblies are burst tested by applying pressure at a constant rate until it reaches a minimum burst pressure of four times the normal operating pressure.

Cat Standards' Compliance

To achieve peak performance from your Cat equipment, hydraulic replacement parts need to be matched with factory-installed components. That's why Caterpillar engineers hose products into the design of every Cat machine.

Close attention to routing and pressure requirements are two key elements that differentiate our ability to provide the highest levels of safety and reliability with our hydraulic systems.



UNMATCHED SUPPORT for maximum uptime

THE KEY TO MAINTAINING MACHINE PRODUCTIVITY

When you need a hose assembly, you need it now. That is why your Cat dealer is uniquely skilled to perform the assembly and installation.

Trained dealer technicians use the latest tooling, assembly information, routing standards, inspection techniques, and contamination control processes to get your machines up and running quickly and reliably.

Solutions That Are Optimal for Your Entire Fleet



Mining, earthmoving, excavation, forestry and compact machines can all benefit from Cat hose and couplings. Our product line meets wide-ranging applications from high pressure to low pressure hydraulic lines.

Convenience

The only thing your Cat dealer needs to build an exact replacement Cat hydraulic hose assembly is the Cat part number – and it's right on the hose label. Order by phone and your dealer will have a replacement hose waiting for you when you arrive.

In-stock Components

Your dealer uses ongoing inventory analysis and management to ensure adequate components for customers' machines are always available. In addition, Caterpillar backs up dealers with a network of strategically placed distribution centers in every part of the world to ensure continued parts availability.



Expert Installation

Dealer technicians are specially trained to accurately install hose assemblies.



Your Cat dealer is equipped with the latest layout, equipment, and software. This ensures the fastest and most reliable hose assembly replacement services.

Caterpillar follows SAE Guidelines for Hose Shelf Life

- 10 YEARS from date of manufacture for bulk hose.
- 2 YEARS from date of build for a hose assembly.
- Can continue to extend in 2 YEAR increments by pressure testing the assembly.

From a technical perspective, all hydraulic hose has similar shelf life.

HARDWARE AND SOFTWARE INTEGRATED TO WORK MORE EFFICIENTLY THAN EVER

Your Cat dealer is equipped with proprietary tools and reference material that are unmatched in the industry.



Computer-controlled hose assembly machines guide technicians through every step of the process, improving speed and accuracy for quality hose assemblies

Select Hose Type

294	294TG	294CP
294HT	716	716TG
844	844HT	XT3ES
XT3ESTG	XT5ES	XT5ESTG
XT6ES	XT6ESTG	XT6
CAT AC FC	743	945

Select Coupling Type

Hose Type: XY3ESTG

ESA	S4G	TR
XN		

Crimp

Position Coupling in Machine and Apply Pressure when Ready

Hose Type: XT3ESTG
Coupling Type: XN
Dash Type [mm]: +S
Die Size [mm]: 24
Crimp Length [mm]: 37.0
Slive Length [mm]: No Slive

Caliper Measurement Step 6 of 6

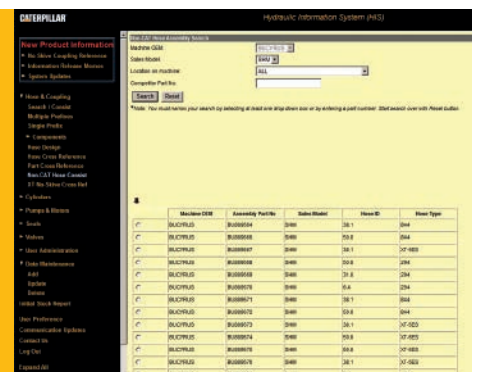
Push Back Button to Retake Measurements or Press OK to Accept

Required [mm]: 24.50
Tolerance [mm] +/-: 0.25
Actual [mm]: 24.47

OK

HYDRAULIC INFORMATION SYSTEM

"HIS" puts information about Cat hose, for both current and non-current machines at the dealers' fingertips. Using this on-line system, Cat dealers can find parts data for your equipment quickly and provide accurate quotes for replacement hose assemblies.





Under development

TEST BENCHES

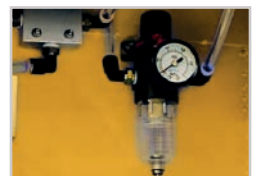
Testing of finished hose assemblies ensures that the components were properly assembled according to Caterpillar's specification. Cat test benches are designed for easy and safe operation.

Innovation and Quality

Effective and precise tools can accommodate hose assembly lengths up to 2500 mm. With the 4 parallel test lines and a quick clamping system, 120 assemblies per hour can be tested. Has automatic and manual setup options and customizable test or test protocols (printable and storable).



Tank with closed circulation for your test medium.



Compressed air filter with capacitor for water separation.



The flood and safety valve.



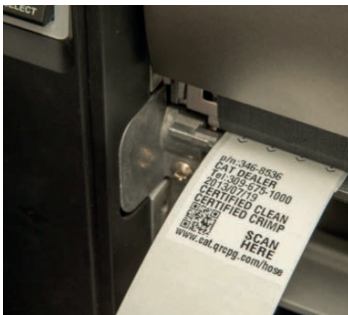
Simple push-fit assembly.

A NEW HOSE LABEL ENABLING TECHNOLOGY AND CONVENIENCE

To make ordering new hydraulic hose assemblies fast and easy, the new self-adhesive Acrylic Hose Label gives customers quick access to more parts and service information on their hydraulic hose than ever before.

User-friendly Technology that Saves Your Time

With a QR Code now standard on hose assembly labels, you have access to Dealer Locator, ordering capability, and important hydraulic hose reference information. It's all about providing you the information you need to get a replacement hose *faster*.



ALL YOU NEED TO KNOW

The information on the label provides quick access to ordering a new hydraulic hose. Part number, assembly date, dealer name, dealer telephone number, and QR code for scanning are right at the customer's finger tips.



LONG LASTING LABELS

It's a robust, durable, self-laminating label that wraps over itself to protect the printed information from the elements, cleaners, debris, etc.



EASY TO USE

Our label allows for easy access by scanning the QR Code. This website will give customers direct access to Dealer Locator, and reference/marketing material.



A New Smart Way to Access Informations and Place Orders

The new website is designed for optimized use on mobile devices. However, it can be used on PCs as well.

The new **mobile hoselanding page** was created to provide customers with key hose marketing and promotional information.

In addition, this site provides customers direct access to Dealer Locator.



Dealer Locator



PartStore™

Place Hose Order



Preferred Connection



Removal & Installation



When to Replace Hose



Product Information



Visit Cat.com



ON-SITE MOBILE HOSE SHOP

When a hose failure occurs at a remote location, you expect a quick, reliable repair. A Cat Hose Assembly Mobile Workshop – engineered and stocked to support your machine population – provides the immediate support you need, exactly where you need it. This minimizes your downtime by ensuring that any machine can return to operation quickly.

Cat On-site Mobile Hose Shops can be personalized to meet your specific site or project needs. Optional heating and cooling units can be added to your container to improve working conditions in unusually hot or cold climates.



DOUBLE WIDE: two 40 ft (13m) containers – side by side.



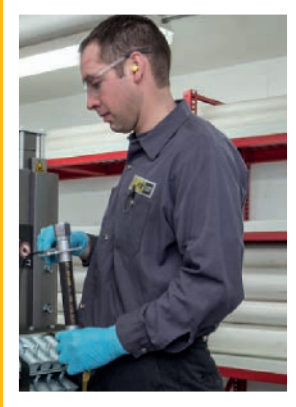
SINGLE WIDE: one 40 ft (13m) container.



- Two sizes available.
- Insulated with heating and cooling.
- Fully equipped with Cat tooling.
- Integrated exhaust.
- Storage cabinets/shelving/work bench.
- Country compliant, CE, CSA, UL, etc...
- Customization option available.

DISCOVER THE VALUE OF USING CAT COMPONENTS

Whether you have one machine or one hundred, whatever your equipment or application, make Cat hydraulic hose assemblies your preferred connection. From expertise, design, manufacturing and testing, to unmatched dealer support, the difference is in the details. And the performance is for the long run.



CAT DEALERS DEFINE WORLD-CLASS PRODUCT SUPPORT.

We offer you the right parts and service solutions – including comprehensive hydraulic support – 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.

**HELPING YOU GET THE MOST FROM YOUR EQUIPMENT.
THAT'S WHAT WE'RE BUILT TO DELIVER.**

YOUR CAT DEALER

LET'S DO THE WORK.™

AEXQ1465

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