

INCH-POUND

A-A-59918A

18 October 2013

SUPERSEDING

A-A-59918

17 April 2013

COMMERCIAL ITEM DESCRIPTION  
 SELF PROPELLED CONCRETE SAW  
 (SPCS)

1. SCOPE.

1.1 Scope. This Commercial Item Description (CID) covers the Self Propelled Concrete Saw (SPCS) which is part of the Route Remediation set of capabilities. The SPCS enables the route remediation team to rapidly and effectively “square-out” a damaged area during the repair process.

2. APPLICABLE DOCUMENTS.

2.1 General. The documents listed in this section are specified in this specification. This section does not include documents cited in other sections of this specification or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirement documents cited in this Commercial Item Description, whether or not they are listed.

2.2 Government Documents

2.2.1 Specification, Standards and Handbooks. The following specifications, standards and handbooks form a part of this document to the extent specified herein. These documents may be listed in the Department of Defense Index of Specifications and Standards (DoDISS) which indicates the latest version.

SPECIFICATIONS

A-A-50271

Plate Identification

A-A-52624

Antifreeze, Multi-Engine Type

Comments, suggestions, or questions on this document should be addressed to the Commander, U.S. Army Tank-automotive and Armaments Command, ATTN: RDTA-EN/STND/TRANS, MS-268, Warren, MI 48397-5000 by letter or emailed to [usarmy.detroit.rdecom.mbx.tardec-standardization@mail.mil](mailto:usarmy.detroit.rdecom.mbx.tardec-standardization@mail.mil). Since contact information can change, you may want to verify the currency of this address information using the ASSIST Online database at <https://assist.dla.mil>.

AMSC N/A

FSC 3750

UNCLASSIFIED: Distribution Statement A. Approved for public release.

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## FEDERAL

FED-STD-595/34094/33446	Colors
FED-STD-376	Preferred Metric Units for General Use by the Federal Government

## MILITARY

MIL-PRF-2104	Lubricating Oil, Internal Combustion Engine Combat/Tactical Service
MIL-PRF-10924	Grease, Automotive Artillery
MIL-PRF-46176	Hydraulic Fluid, Rust Inhibited, Fire-Resistant, Synthetic Hydrocarbon Base, NATO Code No. H-544 MIL-PRF-46176 Brake Fluid, Silicone, Automotive All-Weather, Operational and Preservative
MIL-PRF-6083	Hydraulic Fluid, Petroleum Base, for preservation and operation
MIL-PRF-46176	Brake Fluid, Silicone, Automotive All Weather, Operational and Preservative Metric
MIL-STD-130	Identification Marking of U.S. Military Property
MIL-STD-889	Dissimilar Metals
MIL-STD-810	Environmental Engineering Considerations and Laboratory Tests
MIL-STD-1366	Material Transportation System Dimensional and Weight Constraints
MIL-STD-1474	Noise Limits
MIL-STD-209	Interface Standard for Lifting and Tiedown Provisions
NATO F-34	Turbine Fuel, Aviation, Kerosene Type, JP-8
MIL-STD-1472	Department of Defense Design Criteria Standard, Human Engineering

(Unless otherwise indicated, copies of the above specifications, standards, and handbooks are available from the Document Automation and Production Service, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094, or at <http://assist.dla.mil/quicksearch/>).

## DEPARTMENT OF LABOR

29CFR 1910	Occupational Safety and Health Standards (OSHA).
29CFR 1926	Safety and Health Regulations for Construction (OSHA).

## DEPARTMENT OF TRANSPORTATION (DOT)

49CFR 393	DOT Federal Motor Carrier Safety Regulations (FMSCR)
49CFR 571	DOT Federal Motor Vehicle Safety Standards (FMVSS)

(Application for copies should be addressed to the Superintendent of Documents, U.S. Government Printing Office, 732 North Capitol Street, NW, Washington, DC 20402, or at [www.dol.gov](http://www.dol.gov) or at [www.dot.gov](http://www.dot.gov), respectively).

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## U.S. ARMY TARDEC PUBLICATIONS

## TARDEC Petroleum, Oil and Lubricants Products Guide

(Copies of these documents are available from U.S. Army RDECOM, Tank Automotive Research, Development and Engineering Center, ATTN: RDTA-EN/STND/TRANS MS #268, 6501 E. 11 Mile Road, Warren, MI 48397-5000 or can be requested by sending an email to [usarmy.detroit.rdecom.mbx.tardec-standardization@mail.mil](mailto:usarmy.detroit.rdecom.mbx.tardec-standardization@mail.mil).)

2.3 Non-Government publications. The following documents form a part of this document to the extent specified herein.

## SOCIETY FOR PROTECTIVE COATINGS (SSPC)

SSPC-SP1 - Specification for Solvent Cleaning  
 SSPC-SP10 - Specification for Near White Blast Cleaning

(Copies of these documents are available from [www.sspc.org](http://www.sspc.org) or SSPC Publication Sales, 40 24th St., 6th Fl., Pittsburgh, PA 15222-4656.)

2.4 Order of Precedence. In the event of a conflict between the test of this CID and the references cited [except of associated detail specifications or Military Standards (MS)], the text of this CID shall take precedence. Nothing in this CID, however, shall supersede applicable laws and regulations unless a specific exemption has been obtained.

3. SALIENT CHARACTERISTICS.

The SPCS is a fully self-contained, portable and self-propelled concrete saw that shall be capable of cutting hard aggregate cured concrete and reinforced concrete to a minimum of 12 inches using either a 30 inch concrete blade or a 30 inch asphalt over concrete blade, and asphalt to a minimum of 12 inches depth using either a 30 inch asphalt blade or a 30 inch asphalt over concrete blade. The saw blades provided shall be able to cut hard aggregate cured concrete, reinforced concrete, and asphalt to the full rating and capability of the SPCS while being operated and controlled by one person. The SPCS shall perform as specified to the requirements in paragraphs 3.0 through 3.8.1 of this document through either government agency testing or Contractor certification. Failure to meet these requirements during testing or through certification signifies failure to meet the requirements of this CID. The Contractor shall provide a root cause analysis, corrective action plan, and a corrective action to the procuring government agency for all test and certification failures, and any failure to meet any of the requirements in sections 3.0 through 3.8.1 of this document. The Contractor shall resubmit root cause analyses, corrective action plans, and corrective actions until the procuring government agency is satisfied that the corrective action has resolved the failure issue.

3.1 Saw Blades. The saw blade system typically consists of the saw blade, saw blade guard, and engine and saw blade shaft pulley with belts and flange set. The SPCS shall be capable of functioning with a 24 inch saw blade and a 30 inch saw blade. The SPCS shall be provisioned with a total of four saw blades which will be part of the SPCS Basic Issue Items (BI) (see paragraph 3.5). The four blades shall be as follows: Two 30 inch asphalt over concrete blades; and two 30 inch concrete blades. The saw blades shall be designed and rated for use

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on the SPCS. The SPCS and saw blades for which it is provisioned shall be capable of cutting hard aggregate cured concrete, reinforced concrete, and asphalt without loss of fit or function of the saw and components. The requirements in this section will be verified through government testing verification. Failure to meet the requirements during test signifies failure to meet the requirements in this CID; and as a result, the contractor shall submit root cause analyses, corrective action plans, and corrective actions as stated in paragraph 3.

3.1.2 Saw Blade Guard. The saw shall be provisioned with a saw blade guard capable of covering the exposed portion of all saw blades compatible for use with SPCS. The saw blade guard shall also protect the operator from the backlash of water, concrete, and asphalt that may occur during operation. The saw blade guard shall be quick attach and detach without the need for special tools. The guard shall be provisioned with a means for the operator to know the guard is properly attached. The requirements in this section will be verified through government testing verification. Failure to meet the requirements during test signifies failure to meet the requirements in this CID; and as a result, the contractor shall submit root cause analyses, corrective action plans, and corrective actions as stated in paragraph 3.

3.1.3 Saw Blade Water cooling. The SPCS shall be provisioned with a means for connecting an auxiliary water supply for purposes of cooling the saw blade. Water flow volume shall be capable of easily being monitored and adjusted by the operator without the use of special tools. Water shall be delivered directly to the saw blade area for effective saw blade cooling. The SPCS shall be provisioned with a mechanical or electric water pump to control water supply to the saw blade during cutting, when a gravity type water supply is connected to the SPCS. The pump shall provide sufficient pressure to meet all the requirements in this paragraph when the SPCS is connected to the auxiliary water tank. The water pump shall be cable of being turned-off in the event a pressurized water supply is available, and the operator shall be able to control the flow and pressure of water being supplied to the saw blade. The SPCS shall be provisioned with a means for alerting the operator and automatically shutting off the saw when inadequate water supply is provided to the saw blade. The SPCS water supply connections shall be configured to interoperate with auxiliary water supply tank, and with the Engineer Mission Module-Water Distributor (EMM-WD) using the hose connection requirements stated in CID Sections 3.1.3.1 and 3.1.3.3. The SPCS shall be capable of connection and operation with a standard water supply outlet spigot (i.e., ¾-inch male National Hose Thread (NHT) outlet). Failure to meet the requirements during test signifies failure to meet the requirements in this CID; and as a result, the contractor shall submit root cause analyses, corrective action plans, and corrective actions as stated in paragraph 3.

3.1.3.1 EMM-WD Interface. The SPCS shall be provisioned with the capability to interface and interoperate with the EMM-WD. The EMM-WD is provisioned with 5 possible connection points. One connection point is a pressurized 2.5" National Hose Thread (NHT) connection, two connections are gravity 2.5" NHT connections, one is gravity 5.0" NHT and one is a pressurized 1.5" NHT. The SPCS shall be provisioned to utilize a minimum of one of these connection configurations. The pressurized connections operate at 50 psi; 65 gallons per minutes at 1500 Rotations Per Minute (RPM's) or 125 Pressure per Square Inch (psi); 110 gallons per minute at 2400 RPM. Shut-off pressures may reach up to 135 psi. The SPCS will be tested by the procuring government agency to verify conformance to the requirements in this section. Failure to meet the requirements during test signifies failure to meet the requirements in this CID; and as a result, the contractor shall submit root cause analyses, corrective action plans, and corrective actions as stated in paragraph 3.

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3.1.3.2 Auxiliary Water Supply Tank. The SPCS shall be provisioned with an auxiliary water supply tank for use when the EMM-WD is not available, and the auxiliary water tank shall be capable of interfacing with the SPCS. The water tank shall be capable of holding 500 gallons of water. The water tank shall be provisioned with a top fill opening capable of being opened and shut without the use of special tools and designed to prevent water leaking out of the tank. The water tank shall also be provisioned with a male end outlet compatible with the 1.5 inch NHT female hose fitting. The outlet shall be located towards the bottom of the tank to optimize gravity feed. The water tank shall also be positioned in a location which will not interfere with the tank tiedown system used to secure the tank to the PLS-dump body and the FMTV 10-ton dump truck, and allow ease of access for the hose. The water tank shall be capable of being properly secured to the PLS-dump body and the FMTV 10-ton dump truck using standard military tiedown straps or chains in accordance with MIL-STD-209, and the water tank shall be designed with tiedown strap/chain guides intended to prevent slippage. Other tiedown methods may be used provided the tank is properly secured to the PLS-dump body and the FMTV 10-ton dump truck. The water tank shall be capable of being securely transported, without damage, via the PLS-dump body and the FMTV 10-ton dump truck when the water tank is empty; and 100%, 50%, and 10% full. The water tank shall be designed to optimize a lower center of gravity for purposes of having a stable load at 100%, 50% or 10% capacity. The water tank shall be of heavy duty construction polypropylene, equivalent or better material (i.e., the water tank may also be a corrosion resistant metal). Provided that the water tank is polypropylene or plastic, then the tank material shall be colorized to match the SPCS to the maximum extent possible. A corrosion resistant metal water tank shall be painted in accordance with paragraphs 3.4.6 through 3.4.6.3 herein, and the color shall be identical to the SPCS. The words "Non-Potable Water" shall be stenciled on both sides of the water tank. Color shall be as specified by the government procuring agency at time of delivery order. Failure to meet the requirements during test signifies failure to meet the requirements in this CID; and as a result, the contractor shall submit root cause analyses, corrective action plans, and corrective actions as stated in paragraph 3.

3.1.3.2.1 Auxiliary Water Supply Tank Tiedown System. All hardware necessary to securely tie down the auxiliary water supply tank to the PLS-dump body and the FMTV 10-ton dump truck shall be provided with the SPCS. The Contractor shall provide certification documentation and supporting data verifying conformance to the requirements in this section. Failure to meet the requirements during test signifies failure to meet the requirements in this CID; and as a result, the contractor shall submit root cause analyses, corrective action plans, and corrective actions as stated in paragraph 3.

3.1.3.3 Auxiliary Water Supply Hose. The SPCS will be provided with a heavy duty water supply hose, 100 foot in length, durable rubber hose with added protective material such as woven steel or cloth, for abrasion wear resistance. The added protective material may be integrated with the hose or on the exterior of the hose. The hose shall be capable of withstanding a least 150 psi pressure. The hose shall be provisioned with one female 1.5 inch NHT fitting and on the other end of the hose, a male 1.5 inch NHT compatible fitting capable of connecting to the EMM-WD per the requirements stated in CID Section 3.1.3.1. Failure to meet the requirements during test signifies failure to meet the requirements in this CID; and as a result, the contractor shall submit root cause analyses, corrective action plans, and corrective actions as stated in paragraph 3.

## 3.2 Power and Fuel.

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3.2.1 Fuel. The SPCS shall be self-propelled and provisioned with an integral diesel engine capable of using standard military fuel. The contractor shall certify that the diesel powered engine provisioned with the SPCS has sufficient power for effective, full operation of the SPCS used to cut hard aggregate cured concrete. The SPCS shall be designed to be used with fuel in accordance with the Petroleum Oil Lubricants (POL) Products Guide, and shall be capable of utilizing standard U.S. Army fuel of the type which conforms to the requirements stated in specification MIL-DTL-83133, without restrictions or kits. JP-8 shall be the designated primary fuel for engine operation. In addition, equipment shall operate satisfactorily when using JP-5 (in accordance with MIL-DTL-5624), NATO F-34, Jet Fuel F-24 (ASTM D 1655 with military additives equivalent to JP-8), 2-D per A-A-52557, and 2-D S500 per ASTM D975. Failure to meet the requirements during test signifies failure to meet the requirements in this CID; and as a result, the contractor shall submit root cause analyses, corrective action plans, and corrective actions as stated in paragraph 3.

3.2.2 Engine. The SPCS shall be self-propelled and provisioned with an integral diesel engine. The diesel engine shall comply with the Environmental Protection Agency (EPA) emission standards required for its power rating at the time of contract award in accordance with the US Code of Federal Regulations, Title-40, Part 89 (40 CFR Part 89). Pollution control technologies that are affected by the sulfur level of JP-8 (up to 3000ppm) either in maintenance or life expectancy shall not be used, which includes but is not limited to: Exhaust Gas Recirculation (EGR); Nitrous Oxide (NOX) traps; and catalytic converts. As a minimum the engine shall be equipped with:

- a. Heavy duty, dry type, air cleaner with replaceable cartridge.
- b. Fuel filters: primary and water-separating type; each with provision for drainage into an external container.
- c. Exhaust system with guard and rain cap.
- d. Low oil indicator. Engine oil drain, easily accessible for maintenance and to minimize the potential for spillage to the environment.
- e. Heavy duty cooling system capable of maintaining the manufacturers recommended operating temperature when performing at maximum rated capacity. Engine temperature indicator desired. If liquid-cooled, the engine shall operate with antifreeze in accordance with A-A-52624; cooling system overflow reservoir shall be included for liquid-cooled engines, to prevent coolant discharge into the environment.
- f. Engine rotating and moving parts guard, providing reliable, quick, and easy access for maintenance, and requiring no special tools for removal or installation.
- g. Electric start.
- h. Engine oil filter.

The Contractor shall provide certification documentation and supporting data verifying conformance to the requirements in this section. Failure to meet the requirements during test signifies failure to meet the requirements in this CID; and as a result, the contractor shall submit root cause analyses, corrective action plans, and corrective actions as stated in paragraph 3.

3.3 SPCS Control Console. The SPCS instrument panel shall be illuminated such that the displays and controls permit smooth, expeditious and error-free system operation in both daylight and night. The instrument panel shall be illuminated for night operation. The SPCS control console shall be provisioned with a cutting depth adjuster, capable of providing, during

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saw operation, one-handed proportional operator controlled, saw blade raising and lowering depth adjustments without shutting off the SPCS. The SPCS shall be provisioned with speed control on the control console for operator speed adjustment during operation. The SPCS control console shall be provisioned with an electronic ignition switch, and an engine throttle switch. The control console shall also have an emergency stop control located in a position for easy operator access during operation such that the operator shall be able to easily and quickly stop the SPCS in emergency situations. The SPCS shall be capable of starting electrically, by the operator, without assistance from another source. The SPCS control console shall be provisioned with transmission control with variable speed selections for forward and reverse. The SPCS shall be provisioned with the following gauges required for safe operation: tachometer; saw blade-shaft rpm gauge (saw blade tachometer); fuel level gauge; and engine temperature gauge. The SPCS shall be provisioned with indicator lights or gauges for oil pressure, battery charge and glow plug(s). The SPCS will be tested by the procuring government agency to verify conformance to the requirements in this section. Failure to meet the requirements during test signifies failure to meet the requirements in this CID; and as a result, the contractor shall submit root cause analyses, corrective action plans, and corrective actions as stated in paragraph 3.

3.3.1 Cutting Depth Indicator. The SPCS shall be provisioned with a cutting depth indicator located for easy viewing and monitoring by the operator during the cutting operation without turning off the SPCS. The depth indicator shall show the operator current depth as it relates to desired set depth. The SPCS shall be provisioned with a system for preventing over-cutting below desired set depth. The SPCS shall be capable of being raised and lowered by the operator, during the cutting operation. The SPCS will be tested by the procuring government agency to verify conformance to the requirements in this section. Failure to meet the requirements during test signifies failure to meet the requirements in this CID; and as a result, the contractor shall submit root cause analyses, corrective action plans, and corrective actions as stated in paragraph 3.

3.4 Materials Requirements. The SPCS shall be capable of using standard military fuels and lubricants. Materials shall be free from defects which would adversely affect the performance, maintainability and safety of the individual component, the overall assembly, or the operator. Materials shall be of the equivalent or better performance and quality as is used in similar commercial applications. Dissimilar metals shall not be used in intimate contact with each other unless protected against galvanic corrosion. Dissimilar metals and methods of protection are defined and detailed in MIL-STD-889. Any Hazardous Material (HAZMAT) that will be shipped must comply with the following regulations: (1) Code of Federal Regulation Titles 29, 40 and 49, (2) International Maritime Dangerous Goods Code (IMDG), for vessel transport, and (3) AFMAN 24-204, Preparing Hazardous Materials for Military Air Shipments (4) International Air Transportation Association (IATA). If the end item is shipped with any HAZMAT items it shall comply with all Code of Federal Regulations (CFR), IATA, IMDG and AFMAN. The SPCS shall not contain Class I or Class II ozone-Depleting Substances. Asbestos, beryllium, radioactive materials, cadmium (electroplating processes), hexavalent chromium (electroplating, and coatings processes), or other highly toxic or carcinogenic materials as defined in 29 CFR 1910.1200 shall not be used in the manufacture, maintenance, sustainment, or assembly of the SPCS without Governmental approval. These requirements shall apply to any components/parts purchased through a subcontractor/vendor. Lead shall not be used without prior approval from the Government. The use of lead solder may be approved for electrical components where a suitable alternative is not available. Lead-acid batteries may be used without approval from the Government. The Contractor shall provide certification

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documentation and supporting data verifying conformance to the requirements in paragraphs 3.4 through 3.4.6.3. Failure to meet the requirements through certification and supporting documentation in paragraphs 3.4 through 3.4.6.3 signifies failure to meet the requirements of this CID; and as a result, the contractor shall submit root cause analyses, corrective action plans, and corrective actions as stated in paragraph 3.

3.4.1 Lubricating Oil, Internal Combustion Engine. The lubricating oil suitable for lubrication of reciprocating compression-ignition internal combustion engines shall be qualified under MIL-PRF-2104 or MII-PRF-46167 of the appropriate grade for the intended ambient conditions as listed in the respective specification. MIL-PRF-21260 may be used as preservative oil, if required.

3.4.2 Lubrication data plates. A lubrication data plate shall be provided (attached by screws, bolts, rivets, or High Performance Adhesive in a conspicuous protected location) and conform to guidelines of SAE J753. The plate shall identify military lubricants and their commercial equivalents, to include all lubrication points.

3.4.3 Lubrication fittings. Fittings IAW SAE J534 shall be located in a protected, accessible location. Fittings shall be accessible to a grease gun with a 10 inch flexible extension. Fittings shall be accessible without removing or adjusting accessories or parts. Extended lubrication points shall be used for hard to reach areas and be accessible to an operator standing on the ground.

3.4.4 Grease. The grease suitable for use on the SPCS shall be qualified under specification MIL-PRF-10924.

3.4.5 Hydraulic Fluid. The hydraulic fluid suitable for use with the SPCS shall be of a type included in the POL Products Guide. The SPCS shall utilize Hydraulic Tube Fittings where applicable, in conformance with SAE J514 Hydraulic Tube Fittings.

3.4.6 Paint and Finish. The SPCS color shall be as specified by the government procuring agency at time of contract issuance, according to FED-STD-595. The SPCS shall be coated with a paint system in accordance with best commercial practices except that the minimum requirements described in 3.4.6.1 thru 3.4.6.3 shall be met. Chemical Agent Resistant Coating (CARC) is not required. Color shall be as specified by the government procuring agency at time of contract issuance, according to FED-STD-595. The Contractor shall provide certification documentation and supporting test data verifying conformance to the requirements in paragraphs 3.4.6 through 3.4.6.3..

3.4.6.1 Cleaning and Pretreatment. The SPCS shall be cleaned and pretreated in accordance with SSPC-SP10 such that the surface is a near-white blast cleaned surface, when viewed without magnification. All SPCS surfaces shall be free of all visible oil, grease, dirt, dust, mill scale, rust, paint, oxides, corrosion products, and other foreign matter, except for staining. Staining shall be limited to no more than five percent of each square-inch of surface area and may consist of light shadows, slight streaks, or minor discoloration caused by stains of mill scale, or stains of previously applied paint. Before blast cleaning, visible deposits of oil or grease shall be removed by any of the methods specified in SSPC-SP1.

3.4.6.2 Primer. A zinc epoxy primer shall be used as a corrosion preventive measure with a minimum wet film thickness of 3.5 mils but not greater than 5.3 mils, and a minimum dry



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film thickness of 2.0 mils but not greater than 3.0 mils. The zinc content of the zinc epoxy primer shall be a minimum of 65 percent by weight.

3.4.6.3 Topcoat. A topcoat shall be applied and shall have a minimum wet film thickness of 5.4 mils but not greater than 13.5 mils, and a minimum dry film thickness of 2.0 mils but not greater than 5.0 mils. The coating system shall be selected to provide resistance to environmental degradation and coating chipping.

3.5 Basic Issue Items (BII). The SPCS shall be provided with a total of four BII saw blades as follows and as specified in paragraph 3.1: two 30 inch asphalt over concrete saw blades; and two 30 inch concrete saw blades. The Contractor shall over-pack the BII list and the components of the BII with each SPCS in accordance with the packaging instructions developed for the Technical Manuals (TM). BII are essential to place and maintain the SPCS in operation, and to perform routine operator maintenance and services. BII include those select operator tools, operator publications, and safety equipment (i.e. fire extinguishers) authorized for the SPCS. The Contractor shall list BII by National Stock Number (NSN) in a separate operator's manual appendix. The following government expected BII will include but is not limited to the following: air filters; fuel filters; oil Filters; replacement fuses; and 4 saw blades as identified in this paragraph. The 100 foot water supply hose (see paragraph 3.1.3.1) and necessary couplings to interface with the EMM-WD (see paragraph 3.1.3.3) shall also be included and considered as part of the BII. The SPCS will be tested by the procuring government agency to verify conformance to the requirements in this section. The Contractor shall provide certification documentation and supporting data verifying conformance to the requirements in this section. Failure to meet the requirements through certification and supporting documentation signifies failure to meet the requirements of this CID; and as a result, the contractor shall submit root cause analyses, corrective action plans, and corrective actions as stated in paragraph 3.

3.5.1 Reliability and Maintainability. The reliability and maintainability of the equipment shall be equal to, or better than the commercial performance of equivalent equipment used in similar environments. The Contractor shall provide certification documentation and supporting data verifying conformance to the requirements in this section. Failure to meet the requirements through certification and supporting documentation signifies failure to meet the requirements of this CID; and as a result, the contractor shall submit root cause analyses, corrective action plans, and corrective actions as stated in paragraph 3.

3.6 Human Factors Engineering Requirements. The SPCS shall be of a weight and ergonomic design which allows it to be safely operated by one person in compliance with the requirements per MIL-STD-1472. Specific areas of particular attention in MIL-STD-1472 include, but are not limited to; control/display integration; general criteria; movement relationships; display illumination including night vision device compatibility; Switches and controls; vibration; weight including push/pull forces; handles and grasp areas. The SPCS shall be equipped with a means to dim and turn off the control/display lighting to permit compliance with night vision device compatibility. MIL-HDBK-759 may be used for information and guidance regarding human factors engineering for Army materiel. The SPCS will be tested by the procuring government agency to verify conformance to the requirements in paragraphs 3.6 through 3.6.2 of this document. Failure to meet the requirements through certification and supporting documentation in paragraphs 3.6 through 3.6.2 signifies failure to meet the requirements of this CID; and as a result, the contractor shall submit root cause analyses, corrective action plans, and corrective actions as stated in paragraph 3.

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3.6.1 Human Factors Engineering Noise Requirements. The SPCS shall conform to the requirements of MIL-STD-1474 noise limits. The SPCS shall emit the lowest possible noise below 85 dBA as is achievable for Commercial-Off-The-Shelf (COTS) equipment. For equipment which creates noise levels of 85-100 dBA, caution signs, in compliance with MIL-STD-1474 shall be posted, stating hearing protection is required.

3.6.2 Safety Requirements. The SPCS shall comply with all applicable commercial, federal, or military safety hazard standards. It shall meet all industry and government requirements and design practices to ensure the system optimizes safety during storage, transport, maintenance and operation. The SPCS shall comply with safety requirements per MIL-STD-1472. In addition to the saw blade guard requirements sited in CID Section 3.1, the SPCS shall be provisioned with additional guarding for moving parts such as belts and pulleys. The SPCS shall be provisioned with emergency shutdown devices, lockable controls, electrical cut-out switches or other means to ensure hazards can be controlled wherever possible. These controls, as well as any warning signs or guards shall be positioned to ensure they are visible by the operator and/or maintainer.

3.7 Climatic and Environmental Requirements. The SPCS shall be capable of performing without loss of form, fit, or function, in world-wide environments typical of those experienced in construction. The SPCS, and all SPCS ancillary equipment including the SPCS auxiliary water supply tank, shall be capable of operating as intended, without issue, in ambient temperatures from 33<sup>0</sup> F to 110<sup>0</sup> F. The Contractor shall provide certification documentation and supporting data verifying conformance to the requirements in this section. Failure to meet the requirements through certification and supporting documentation signifies failure to meet the requirements of this CID; and as a result, the contractor shall submit root cause analyses, corrective action plans, and corrective actions as stated in paragraph 3.

3.8 Transportability Requirements. The SPCS shall meet the requirements stated in TEA 70-1 and shall be capable of being securely transported by the following assets. SPCS shall be transportable via M916 LET/M870 series semi-trailer, FMTV M1088/M172 series semi-trailer; FMTV M1078 2.5 ton cargo truck, FMTV M1083 series 5-ton cargo truck, FMTV M1090 5-ton dump truck, FMTV 10-ton dump truck, M929 5-ton dump truck and M917 series 20-ton dump truck. The contractor shall submit dimensional data and certification verifying the SPCS meets transportability requirements. Failure to meet transportability requirements through certification and supporting documentation signifies failure to meet the requirements of this CID; and as a result, the contractor shall submit root cause analyses, corrective action plans, and corrective actions as stated in paragraph 3.

3.8.1 SPCS Tiedown and Lifting System. The SPCS shall be capable of being securely transported, without damage, on all haul assets in paragraph 3.8 using standard military tiedown straps or chains in accordance with MIL-STD-209. Permanent tiedown provisions in accordance with MIL-STD-209 shall also be attached to the SPCS to enable it to be secured to all haul assets in paragraph 3.8. Other tiedown methods may be used provided the tank is able to be properly secured to all haul assets in paragraph 3.8. All hardware necessary to securely tie down the SPCS to the all the haul assets identified in paragraph 3.8 shall be provided with the SPCS. The SPCS shall be able to be lifted on all haul assets described in paragraph 3.8 with appropriately rated Army forklifts using the SPCS tiedowns provisions. Failure to meet SPCS Tiedown system requirements through certification and supporting documentation signifies failure to meet the requirements of this CID; and as a result, the contractor shall submit root cause analyses, corrective action plans, and corrective actions as stated in paragraph 3.

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#### 4. QUALITY ASSURANCE PROVISIONS.

4.1 Product conformance. The products provided shall meet the salient characteristics of this CID. The SPCS shall meet the same product conformance levels as do like SPCSs offered for sale in the commercial market, thus conforming to all of the producer's own drawings, specifications, standards, and quality assurance practices. The government reserves the right to require proof of such conformance as provided for in the provisions of the solicitation or contract/purchase order. The Procuring Agency shall specify the testing requirements.

4.2 Market acceptability. All SPCSs provided in accordance with this CID shall be of the manufacturer's current commercial production model equipped with all components furnished as standard equipment and features customarily furnished with SPCS of this type, whether stipulated herein or not. The SPCS shall be able to cut concrete aggregate as a fully self-contained, portable, self-propelled concrete saw operational and controlled by one person. The SPCS shall be able to cut a minimum of 12 inches using a 30-inch blade. The SPCS model/design level offered shall be one that has been commercially available and has been in use by the commercial, professional organizations for at least one year.

#### 5. PACKAGING.

5.1 Packaging. Preservation, packing, and marking shall be as specified in the solicitation or order.

#### 6. NOTES.

6.1 Intended Use. The SPCS is part of the Route Remediation set of solutions in support of route clearance of enemy threats and other obstacles along a defined route to enable assured mobility for the maneuver commander. It will be used as part of the crater/pothole repair.

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Appendix A – Definitions of Acronyms

BII	Basic Issue Item
CARC	Chemical Agent Resistant Coating
CFR	Code of Federal Regulations
CID	Commercial Item Description
COT	Commercial-Off-The-Shelf
DoDISS	Department of Defense Index of Specifications and Standards
DOT	Department of Transportation
EGR	Exhaust Gas Recirculation
EPA	Environmental Protection Agency
EMM-WD	Engineer Mission Module- Water Distributor
FMSCR	Federal Motor Carrier Safety Regulations
FMVSS	Federal Motor Vehicle Safety Standards
HAZMAT	Hazardous Material
LMTV	Light Medium Tactical Vehicle
MS	Military Standard
MTV	Medium Tactical Vehicle
NHT	National Hose Thread
NOX	Nitrous Oxide
OSHA	Occupational Safety and Health Standards
POL	Petroleum Oil Lubricants
PSI	Pressure per Square Inch
RPM	Rotations per Minute
SPCS	Self-propelled Concrete Saw
TACOM LCMC	TACOM (not an acronym) Life Cycle Management Center
TARDEC	Tank Automotive Research Development and Engineering Center

Custodians:  
Army – AT

Preparing Activity:  
Army – AT

(Project 3750-2013-002)

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST online database at <https://assist.dla.mil>.