



Discussion of AVDS-1790-2CAU Series Engine

RENK America, (RAM) located in Muskegon, MI since 1902, is a world leader in combat vehicle engines. As the Original Equipment Manufacturer, (OEM) RAM's AVDS-1790 engines power heavy, military, tracked vehicles throughout the world. One of the most common applications for this engine is the M60 series, Main Battle Tank, (MBT).

When the M60 was introduced in 1959, the AVDS-1790-2C Series diesel configuration was the newly developed, OEM engine. Since that time six decades ago, multiple upgraded configurations have been developed for improved durability & reliability, increased power output, new features and obsolescence avoidance. Many of these changes and incorporated improvements are the result of better materials, improved designs, Customer requests and advances in technology. These updates are a natural progression for a complex mechanical system, highly beneficial to the product and provide increased capabilities to the user in the intended Main Battle Tank application.

Many Armies operate hundreds of M60 MBTs with the original AVDS-1790-2CA engine, NSN 2815-011-49-1313 that are many decades old. This exact engine configuration has not been manufactured new for many years and is no longer actively managed by the U.S. Army. RAM's technical data package, (TDP) for this engine version is out of date and our supply base for many of the unique parts is inactive. The cost to recover the TDP, resurrect the many obsolete parts, (which involve extensive retooling and requalification) and re-certify would be both excessive and time-consuming. However, RAM can provide an improved engine, (with lower life cycle cost, higher reliability and durability) with the same form, fit and function as the original, (including mating to and operation with the original CD-850 transmission). This equivalent engine has a commercial part number, (-2CAU designation) and is available at a much lower cost than recreating the obsolete 2815-011-49-1313 configuration.

All AVDS-1790 engines developed since the -2C series have the same basic design, construction methodology, exterior size and dimensions. In addition, many of the product improved components are interchangeable and reverse compatible to earlier engine configurations. Therefore, RAM can offer a product improved, -2CAU series equivalent engine, at an economical cost. The -2CAU equivalent engine utilizes mostly -8 series engine internal components. In fact, the entire "long block" of this version will be the latest configuration, -8 series parts. The long block consists of the major, critical engine components, including the crankcase, crankshaft, oil pan, rods, pistons, cylinders, fan towers/fans, cams, fuel injection system and associated hardware. A line restart is not required, as all core items are in current production for use in the M88A2 vehicle. RAM is executing both U.S. Army and commercial contracts to supply this engine and the production line is hot. The -8 series engine is fully supported by the U.S. Army and is in the inventory of many Countries in their M88A2 tank recovery vehicle fleets.

To integrate into the M60, the external, (interface to vehicle) "dressing" parts of the -2CAU equivalent engine will be from the original, -2 series engine design. This includes items such as: wire harness, fuel supply connector, throttle link, metal shrouding, transmission yoke, intake and exhaust air fittings. By combining the -8 core components to the same -2 series exterior parts for the resultant -2CAU equivalent engine, an exact fit to the M60 engine is assured.

A transition to predominantly -8 series components in the M60 vehicle will greatly benefit Users, as the logistic elements – spares, overhaul and parts manuals, training, tools and depot support will be available for many years. The -2CAU equivalent engine is commercially certified in the same manner as the military specification version. Every engine produced will be acceptance tested on a dynamometer and a test report, along with a certificate of conformance will be provided. Please contact RENK America, Business Development for more information and the ROM cost for a new -2CAU engine, packaged for export with updated maintenance manuals. Maintenance parts and technical services are also available for all AVDS-1790 products. Special -2CAU pricing is possible for a near term order, which allows RAM to combine new requirements with a current large order and take advantage of the larger economies of scale.

In conclusion, RAM is the design authority and original developer of the AVDS-1790 series engine. We are the only company to ever manufacture this product line and can offer an OEM warranty. The new, commercially designated, -2CAU equivalent engine will be produced in the same facility that built the original -2 series engine, on the "in production" -8 series production line. The -2CAU engine will perform better than the original, obsolete design with improved reliability, durability and sustainability and will be designed to integrate seamlessly into the M60 vehicle fleet. RAM is prepared to answer any questions regarding the -2CAU engine configuration and would be pleased to respond to any RFI or RFQ issued.