

**INTERNAL REVENUE SERVICE**  
**NATIONAL OFFICE TECHNICAL ADVICE MEMORANDUM**

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Director, Area 10  
Small Business/Self-Employed Operating Division

Taxpayer Name:  
Taxpayer Address:

Taxpayer Identification No:  
Quarters Involved:  
Date of Conference:

**ISSUES:**

(1) Are the tractors described below highway vehicles for purposes of §§ 4041(a) and 4051(a) of the Internal Revenue Code and highway motor vehicles for purposes of § 4481(a)?

(2) Are the sand dump trucks described below highway vehicles for purposes of §§ 4041(a) and 4051(a) and highway motor vehicles for purposes of § 4481(a)?

**CONCLUSIONS:**

(1) The tractors described below are highway vehicles for purposes of §§ 4041(a) and 4051(a) and highway motor vehicles for purposes of § 4481(a).

(2) The sand dump trucks described below are highway vehicles for purposes of §§ 4041(a) and 4051(a) and highway motor vehicles for purposes of § 4481(a).

**FACTS:**

Taxpayer purchases from a tractor manufacturer tractors that are structurally of the kind chiefly used for highway transportation in combination with a trailer or semitrailer. Taxpayer orders the tractors with features that meet Taxpayer's design specifications, and Taxpayer further equips the tractors itself for its use in the oilfield servicing industry. Specifically, as completed the tractors have a rear axle ratio of 5.29, which is higher than is typical for generic interstate cargo-transporting tractors (the

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higher ratio provides more power for startup, the ability to climb steeper grades, and greater traction, but limits the vehicle's maximum speed to 58 miles per hour (mph)), a larger engine cooling system than is typical for generic interstate cargo-transporting tractors, and a fifth wheel that is higher than is typical for generic interstate cargo-transporting tractors. The frames may also be reinforced and equipment may be added or positioned to facilitate acceptance of job site machinery. Taxpayer finishes the tractors by installing or having installed machinery and equipment on the tractor chassis that assists in performing one of six job site functions as follows.

Winch tractor. Taxpayer installs or has installed machinery and equipment including a power take off (PTO), winch, rolling headboard, and mounts and controls. This type of tractor is designed to tow trailers to job sites and then use the winch mounted on the tractor at a job site to rig up various pieces of equipment and retrieve vehicles and equipment that are stranded.

Crane tractor. Taxpayer installs or has installed machinery and equipment including a PTO, hydraulic crane with articulating boom, and hydraulic pump. This type of tractor is designed to tow trailers to job sites and then move equipment at the job site.

Compressor tractor. Taxpayer installs or has installed machinery and equipment including a PTO, compressor, over speed shutdown<sup>1</sup> on the road engine, and mounts and controls. This type of tractor is designed to tow trailers to job sites and then use high pressure/high volume air-starting capability equipment mounted on the tractor to air-start large diesel deck engines mounted on the trailer towed by the tractor.

Hydraulic start tractor. Taxpayer installs or has installed machinery and equipment including a PTO, hydraulic components, over speed shutdown on the road engine, and mounts and controls. This type of tractor is designed to tow trailers to job sites and then use hydraulic starting capacity equipment mounted on the tractor to start large diesel deck engines mounted on the trailer that is towed by the tractor.

Acid pump tractor. Taxpayer installs or has installed machinery and equipment including a PTO, compressor, over speed shutdown on the road engine, and mounts and controls. This type of tractor is designed to tow tank-trailers to job sites and then use the equipment mounted on the tractor to pump acid from the tank-trailer that it towed or from on-site tanks into oil and gas wells.

Blower tractor. Taxpayer installs or has installed machinery and equipment including a PTO, blower, over speed shutdown on the road engine, and mounts and

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<sup>1</sup> A shutdown system monitors control devices and shuts down the engine when out-of-limit parameters are reached.

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controls. This type of tractor is designed to tow trailers to job sites and then use the low pressure/high volume air equipment installed on the tractor for transferring dry bulk products such as cement and sand from the trailer it has towed to well site storage bins.

It is expected that the tractors will be used in tandem with specific trailers or semitrailers, but the tractors are capable of towing any trailer or semitrailer that fits with its fifth wheel coupling device. A tractor's fifth wheel may be easily replaced.

Taxpayer also purchases sand dump trucks, which are designed to deliver sand to blenders at oilfield job sites. The truck has two compartments so that it can transport different types of sand. The body interior is designed to create a weather tight environment to prevent transfer of material between the partitions or create void space in corners. The sand delivered by the truck is blown into the compartments. A sand hauling bed device calibrates the sand for dumping into a blender or hopper at the well site. Tailgates are geared for metering sand into a hopper. The sand is delivered into a blender or hopper through pneumatic lines that provide for proper gravity feed and sand flow. The truck has a tare weight of 22,500 pounds and a gross vehicle weight rating of 47,500 pounds; is not overwidth, overheight, or overweight for public highway use purposes; and can transport its load over the public highway without a special permit. It is designed to be capable of, but not limited to, transporting its load on "maintained, gravel, dirt or blacktop roads."

Taxpayer has provided the tractor and truck manufacturers with exemption certificates stating that the vehicles are being purchased for use in the manufacture of nonhighway vehicles, it does not pay the heavy vehicle use tax, and it has filed claims for refund for diesel fuel used in the vehicles based on its position that the tractors and trucks are not highway vehicles.

#### LAW AND ANALYSIS:

Section 4051(a)(1) imposes an excise tax on the first retail sale of the following enumerated articles: automobile truck chassis and bodies, truck trailer and semitrailer chassis and bodies, and tractors of the kind chiefly used for highway transportation in combination with a trailer or semitrailer.

Section 4081(a) imposes an excise tax certain removals, entries, or sales of diesel fuel.

Section 4481(a) imposes excise tax on the use of highway motor vehicles, and § 4482(a) states that the term highway vehicle means any motor vehicle which is a highway vehicle.

Section 6427(l)(1) provides that if diesel fuel on which tax has been imposed by § 4041 or § 4081 is used by any person in a nontaxable use, then a refund is allowable to the ultimate purchaser of such fuel in an amount equal to the amount of tax imposed on the fuel under § 4041 or § 4081. Nontaxable use includes uses that are not use as

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a fuel in a diesel-powered highway vehicle.

Section 145.4051-1(a)(2) of the Temporary Excise Tax Regulations under the Highway Revenue Act of 1982 (Pub. L. 97-424) provides that a chassis or body is taxable under § 4051(a)(1) only if such chassis or body is sold as a component part of a highway vehicle (as defined in paragraph (d) of § 48.4061(a)-1 of the Manufacturers and Retailers Excise Tax Regulations), which is an automobile truck, truck trailer or semitrailer, or a tractor of the kind chiefly used for highway transportation in combination with a trailer or semitrailer.

Section 145.4051-1(e)(1)(i) defines a “tractor” as a highway vehicle primarily designed to tow a vehicle, such as a trailer or semitrailer, but does not carry cargo on the same chassis as the engine. A vehicle equipped with air brakes and/or towing package will be presumed to be primarily designed as a tractor. Section 145.4051-1(e)(1)(ii) provides a list of equipment that will cause an incomplete chassis cab to be presumed to be designed as a tractor.

Section 145.4051-1(e)(2) defines a “truck” as a highway vehicle that is primarily designed to transport its load on the same chassis as the engine even if it is also equipped to tow a vehicle, such as a trailer or semitrailer.

Section 41.4482(a)-1 states that the term highway motor vehicle means any vehicle that is both propelled by means of its own motor and is a highway vehicle as defined in § 48.4061(a)-1(d).

Section 48.4061(a)-1(a)(3)(i) includes as a part of a taxable truck chassis or body equipment that is installed on a taxable chassis or body and that contributes to the highway transportation function of the chassis or body. Further, the regulation includes loading and unloading equipment as an example of machinery and equipment that contributes to the highway transportation function of a chassis or body.

Section 48.4061(a)-1(a)(3)(ii) provides that amounts charged for equipment installed on a taxable chassis or body are not part of the taxable sales price if (A) such equipment does not contribute to the highway function of the chassis or body and (B) the reasonableness of the charge is supported by adequate records.

Section 48.4061(a)-1(d)(1) defines a highway vehicle as any self-propelled vehicle, or any trailer or semitrailer, designed to perform a function of transporting a load over public highways, whether or not also designed to perform other functions, but does not include a vehicle described in § 48.4061(a)-1(d)(2) of the regulations. The term transporting includes towing. A vehicle does not include the vehicle's load.

Section 48.4061(a)-1(d)(2)(i) (the mobile machinery exception) provides that a self-propelled vehicle or trailer or semitrailer is not a highway vehicle if (A) it consists of a chassis to which there has been permanently mounted (by welding, bolting, riveting, or other means) machinery or equipment to perform a construction, manufacturing,

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processing, farming, mining, drilling, timbering, or operation similar to any of the foregoing enumerated operations if the operation of the machinery or equipment is unrelated to transportation on or off the public highways (the mobile machinery A test), (B) the chassis has been specially designed to serve only as a mobile carriage and mount (and a power source, where applicable) for the particular machinery or equipment involved, whether or not such machinery or equipment is in operation (the mobile machinery B test), and (C) by reason of such special design, such chassis could not, without substantial structural modification, be used as a component of a vehicle designed to perform a function of transporting any load other than that particular machinery or equipment or similar machinery or equipment requiring such a specially designed chassis (the mobile machinery C test).

Section 48.4061(a)-1(d)(2)(ii) (the offhighway vehicle exception) provides that a self-propelled vehicle or trailer or semitrailer is not a highway vehicle if it is (A) specially designed for the primary function of transporting a particular type of load other than over the public highway in connection with a construction, manufacturing, processing, farming, mining, drilling, timbering, or operation similar to any of the foregoing enumerated operations (the offhighway vehicle A test), and (B) if by reason of such special design, the use of such vehicle to transport such load over the public highways is substantially limited or substantially impaired (the offhighway vehicle B test). For purposes of applying subsection (B), account may be taken of whether the vehicle may be driven at regular highway speeds, requires a special permit for regular highway use, is overweight, overheight or overwidth for regular highway use, and any other relevant considerations. Solely for purposes of determinations under this paragraph, where there is affixed to the vehicle equipment used for loading, unloading, storing, vending, handling, processing, preserving, or otherwise caring for a load transported by the vehicle over the public highways, the functions are related to the transportation of a load over the public highways even though the functions may be performed off the public highways.

Rev. Rul. 77-301, 1977-2 C.B. 365, holds that certain truck chassis that are manufactured into vehicles specially designed to transport and apply liquid or dry fertilizer on farms are not highway vehicles. The chassis initially had standard truck frames and cabs, were equipped with standard highway truck wheels and tires, but also had nonstandard axles, brakes, and transmissions; they were initially of a type classified as a highway chassis. Subsequently, the chassis were modified by shortening the frames, altering the steering linkage, and installing PTOs, hydraulic pumps, and air compressors. The fuel and carburetor air systems were modified so as to perform more efficiently under dusty conditions. In addition, the standard truck wheels were replaced with larger wheels to accommodate 48 x 25.00 front and 66 x 43.00 rear high flotation off-highway tires. The vehicles were completed by mounting oversize spreader bodies in the chassis. The completed vehicles were over 132 inches in width (as opposed to 102 inches or less, which is typical for highway vehicles), had maximum unloaded speeds of 30 mph, and were not equipped to unload liquid or dry chemicals other than by means of an elaborate spreader system that made a 60-foot

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wide swath. The ruling holds that the vehicles are offhighway vehicles for purposes of § 48.4061(a)-1(d)(2)(ii); the completed vehicles produced by the company have features indicating they are specially designed for the primary function of transporting and spreading agricultural chemicals on the farm and, because of such special design, the use of the vehicles on public highways is substantially limited.

Rev. Rul. 79-191, 1979-1 C.B. 338, holds that an explosives handling vehicle with a payload capacity of 25,000 pounds comprised of a truck chassis, a body designed to transport liquid and solid components in separate compartments, and elaborate mixing and other job site equipment for use at a blasting site is a highway vehicle. However, the ruling concludes that the cost of the mixing equipment and other job site equipment is excludable from the tax base as the nontaxable load on the sale of the vehicle.

Rev. Rul. 79-192, 1979-1 C.B. 340, holds that certain street sweeping vehicles that have varying sweeping and traveling speeds and can travel at normal city speeds when in transit to and from the job and dump sites are highway vehicles, but that vacuum equipment, water hoses, and certain other components of street sweeper vehicles are items that primarily perform the non-transportation function of street cleaning and are excludable from the tax base. The ruling holds that an article contributes to the highway transportation or load-carrying function of a vehicle for purposes of the regulations only if it contributes as much or more to the highway transportation function as to the nontransportation function. The ruling states that this means an item that contributes primarily to the nonhighway transportation function of a vehicle is not taxable.

Rev. Rul. 79-296, 1979-2 C.B. 370, holds that a truck-tractor and low-bed semitrailer that are used to transport military equipment on and off the highway and that are oversize, overweight, and require special permits and/or escort vehicles for use on most state highways are highway vehicles subject to taxes imposed by §§ 4041, 4061(a)(1) and 4481. The truck-tractor and low-bed semitrailer are used in combination for transporting battle tanks, personnel carriers, construction equipment, semimobile power plants, and other heavy loads over the highway from railheads, ports, or depots to user maintenance areas. The units are also used off the highway over rough terrain, sand, soft soils, etc., in evacuating disabled battle tanks and similar vehicles from, and delivering high density cargo into, remote combat and field support areas. The truck-tractor and low-bed semitrailer are necessarily constructed to exceed highway size limits in order to accommodate their intended load. Because of this oversize, the operation of the combination over the highways in most states requires either special permits or escort vehicles, or both. The truck-tractor is capable of a maximum speed of 38.5 miles per hour with a heavy load. The ruling holds that the offhighway vehicle exception contained in § 48.4061(a)-1(d)(2)(ii) does not apply as the truck-tractor and semitrailer in this case are designed to carry the military equipment both over the highway and over rough terrain with neither function being "primary." Thus, the vehicles are not specially designed for the primary function of transporting this type of load other

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than over the public highway for purposes of the offhighway vehicle A test. Further, although the vehicles have characteristics that impair their use on the highway in that they are oversize and require a special permit and/or escort vehicles, those characteristics are necessary in order to enable the vehicles to carry their intended load and, thus, the vehicles do not meet the offhighway B test.

Rev. Rul. 79-308, 1979-2 C.B. 372, holds that a mixer-feeder truck body that has a width of 96-108 inches, that can sustain highway speeds of 40 to 50 mph, and that is used to transport and mix feed for dairy and beef cattle is a highway vehicle.

Rev. Rul. 80-353, 1980-2 C.B. 309 (type 2 chassis), holds that the mobile machinery exception is not applicable to a three-axled truck chassis on which three tanks or compartments were mounted that was designed for and used for transporting cement and water, mixing the cement at the job site, and pumping it into oil wells. The chassis was comprised of heavy duty, high tensile steel frames that had been reinforced, standard running gear, special drive trains, was used on and off the highway, and was capable of traveling at 52 mph. The ruling holds that the vehicle is a highway vehicle because it failed the mobile machinery A test because the machinery mounted on the chassis is used to transport cement and water to the job site and therefore its operation is not unrelated to transportation; no discussion was considered necessary as to whether the vehicle was within the offhighway vehicle exception.

Rev. Rul. 95-40, 1995-1 C.B. 195, holds that certain industrial vacuum loader vehicles are taxable highway vehicles. The vehicles are comprised of a self-loading truck comprised of a highway-type chassis, industrial vacuum equipment, and a collector body. The chassis for the vacuum loader is usually modified to facilitate the installation of the collector body and other equipment including a change in the cab-to-axle length, reinforcement by fishplating, replacement of the standard drive shaft, and relocation or addition of cross-members, but this does not prevent the vehicle from being driven at regular highway speeds, nor does it result in the vehicle being overweight, overheight, or overwidth for regular highway use. The vacuum equipment is used to retrieve either wet or dry debris at a clean-up site and load debris into the body, and the debris is then either driven to a dump site or transferred to another transport vehicle for removal. The vehicle has installed on it components of industrial vacuum equipment for use at the job site and is considerably more expensive and transports a smaller load than a single function transporter such as a dump truck. The ruling holds that vacuum loaders are highway vehicles and fail to meet the mobile machinery exception because the large collector bodies mounted on the chassis are designed to transport cargo; vacuum loaders are designed as multi-functional vehicles that not only retrieve waste from clean-up sites but also to carry a substantial cargo from the clean-up site on and off the public highways to the cargo's disposal site. Accordingly, the chassis do not serve only as a carriage and mount for machinery and equipment unrelated to transportation on or off the public highways (that is, the chassis was not limited to job site non-transportation use). The ruling recognizes that although a vacuum loader is not the least expensive method to transport a load over the

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highway, its use is often the most efficient way to clean up a site and remove the debris. The ruling also holds that vacuum loaders do not meet the exception for certain vehicles designed for off-highway transportation provided in § 48.4061(a)-1(d)(2)(ii). Specifically, vacuum loaders are produced from highway-type chassis and are not designed for the primary function of carrying a particular load other than over the public highway. Nor is a vacuum loader's ability to carry a load over the public highways substantially limited or substantially impaired.

#### A. Tractors

Each of the six types of tractors at issue is a tractor of the kind chiefly used for highway transportation in combination with a trailer or semitrailer. However, Taxpayer argues that the tractors as equipped are not highway vehicles because they are described in § 48.4061(a)-1(d)(2)(i) as mobile machinery vehicles or in § 48.4061(a)-1(d)(2)(ii) as offhighway vehicles. We disagree.

Section 48.4061(a)-1(d)(1) defines a highway vehicle as any self-propelled vehicle or trailer or semitrailer designed to perform a function of transporting a load over the public highway, whether or not also designed to perform other functions. Section 48.4061(a)-1(d)(2) excepts from the definition of highway vehicle certain specially designed mobile machinery vehicles and certain vehicles specially designed for offhighway transportation.

With respect to the mobile machinery exception, although the tractors meet the mobile machinery A test, they do not qualify for the mobile machinery exception because they do not meet the mobile machinery B and C tests. Specifically, each of the six types of tractors are self-propelled vehicles that consist of a chassis to which there has been permanently mounted machinery or equipment to perform a mining, drilling, or similar operation unrelated to transportation on or off the public highways. Thus, the A test is met. However, the tractor chassis have not been specially designed to serve only as a mobile carriage, mount, and power source for the particular machinery or equipment involved as required by the B test. To the contrary, each of the six types of tractors is designed to tow a trailer or semitrailer: each has a fifth wheel, engine capacity in excess of that needed to transport its chassis, a braking system designed to tow a trailer, and is denominated by the manufacturer and Taxpayer as a "tractor." The mobile machinery exception is limited to vehicles whose load only consists of permanently installed machinery on the chassis of the vehicle, not tractors designed to tow trailers or semitrailers.<sup>2</sup> With regard to the C test, the tractors can

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<sup>2</sup>The mobile machinery exception provides tax-favored treatment as nonhighway vehicles to a narrow class of vehicles that may be designed only or primarily to use the highway; that is, they may have no or few offhighway design characteristics (otherwise they might qualify under the offhighway vehicle exception). The rationale for the exception is that vehicles designed only as mounts for mobile machinery will spend

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without any structural modification transport trailers and semitrailers. Thus, the three mobile machinery tests are not all met; accordingly, the tractors do not qualify for the mobile machinery exception.

With respect to the offhighway vehicle exception, the tractors meet neither the offhighway A or B test. To meet the offhighway vehicle exception a vehicle must be “specially designed” for the “primary function” of transporting a particular load other than over the public highway, and by reason of that special design be “substantially limited or substantially impaired” in its use of the public highway. The offhighway vehicle exception typically applies to oversized vehicles; that is, vehicles designed to transport a load whose special design features (for example, overwidth or overheight) make them unsuitable for transporting their load over the public highway. These vehicles (such as oversized dump trucks), transport a removable load but transport that load off the highway, such as at mines or quarries. As provided in the regulations, an offhighway vehicle is excepted from taxation even if it is designed to use the public highway as long as its special offhighway design is for the primary function of transporting its load other than over the public highway and substantially limits or impairs public highway use.

With regard to the offhighway vehicle A test, the tractors in question incorporate highway-type tractor chassis that meet all federal and state requirements, including weight and size requirements, and braking, lighting, and other safety requirements, to transport a load over the public highways. Further, several design features that Taxpayer claims indicate a special offhighway transportation design are not related to a transportation purpose at all, and others appear to be related only partly to a transportation purpose. Specifically, installation of machinery and equipment such as a crane, winch, compressor, pump, or blower, on a tractor chassis is not probative as to either a highway or an offhighway transportation purpose; the machinery is designed to function while the vehicle is performing at a job site while stationary, not while it is transporting its load either on or off the highway. The offhighway vehicle exception focuses on where a vehicle transports, not whether or where it performs a job site function. Similarly, the installation of a PTO, a large engine cooling system, and the reinforcement of the frame are all intended to facilitate stationary job site performance, not to facilitate transportation either over or off the highway. Thus, inclusion of these

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most of their time off the public highway at a job site. However, the regulations provide that for a vehicle to be described within the mobile machinery exception, the chassis must be specially designed to serve only as a mobile carriage, mount, and power source for the particular machinery or equipment involved. Thus, even a vehicle that is primarily designed to transport mobile machinery does not qualify as a mobile machinery vehicle if it is also designed to transport cargo or tow a trailer; because the exception applies to vehicles that may not be excepted from taxation as offhighway vehicles, the mobile machinery exception requires a higher degree of dedication in design (that is, it requires exclusive dedication as a mobile machinery vehicle) than does the offhighway vehicle exception.

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features is not supportive of a special design for offhighway transportation. A high rear axle ratio provides more power for startup, which is a highway transportation function; transportation on steep grades, which is both a highway and offhighway transportation function; and greater traction, which serves an offhighway transportation function in transporting loads on offhighway terrain but also serves a highway transportation in transporting heavy loads. A high fifth wheel provides greater clearance between the tires and the trailer or semitrailer when transporting a heavy load and may also provide greater ground clearance on rough terrain, a design feature that may facilitate offhighway transportation. In any event, the offhighway features do not rise to the level of a special design for a “primary function” of offhighway transportation given the totality of the tractors’ highway transportation design features; many vehicles such as sport utility vehicles, 4-wheel drive vehicles, and dump trucks have some offhighway design features, but are still designed to function primarily as highway vehicles.

With regard to the offhighway B test, the use of the tractors to transport their load over the public highways is not substantially limited or substantially impaired. The tractors may be driven at regular highway speeds; do not require a special permit for regular highway use; and are not overweight, overheight, or overwidth for regular highway use.<sup>3</sup> Thus, the tractors do not meet the mobile machinery B test. Neither of the two offhighway vehicle tests is met; accordingly, the tractors do not qualify for the offhighway vehicle exception.

Taxpayer makes two arguments in favor of excepted treatment as offhighway vehicles: (1) the tractors are specially designed to perform job site functions related to the provision of oilfield services and work in tandem with trailers that perform functions related to the provision of oilfield services at oilfield sites, and (2) the tractors’ design prevents their economically efficient use to transport generic cargo to loading dock warehouses over the interstate highway system because they are limited to a lower speed, transport expensive job site equipment, and are heavier than other tractors because they also perform job site functions. Further, due to their job site function, they log 26,000 miles per year whereas generic interstate cargo-transporting tractors log 100,000 miles per year.

With regard to the first argument, the offhighway vehicle exception focuses on where a vehicle is designed to transport its load and whether the offhighway design impairs highway transportation capability, rather than whether or where the vehicle performs nontransportation job site functions; thus, performance of job site functions is not relevant to qualification for the offhighway vehicle exception.

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<sup>3</sup> Further, the equipment affixed to the winch, acid pump and blower tractors is used for unloading, handling, or processing, a load transported by the tractor over the public highways; thus, under the regulations, the functions are related to the transportation of a load over the public highways even though the functions may be performed off the public highways.

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With regard to the second argument, the public highway includes all public roads, so that local transporters that cannot or do not use interstate highways, or are of a type that travel fewer miles than interstate transporters, are highway vehicles. Classification as a highway vehicle applies to local transporters unless they are specially designed to transport their load other than over the public highway; there is no limitation of tax to vehicles that transport their load over interstate highways or transport the greatest load in terms of weight or volume for the lowest possible price. See Rev. Rul. 79-191 (explosives handling vehicles with substantial job site functions are highway vehicles); Rev. Rul. 79-192 (street sweeping vehicles that have varying sweeping and traveling speeds and can travel at normal city speeds when in transit to and from the job and dump sites are highway vehicles); Rev. Rul. 79-296 (oversize truck-tractor and low-bed semitrailer that are used to transport military equipment on and off the highway and that travel a maximum speed of 38.5 miles per hour are highway vehicles); Rev. Rul. 79-308 (a vehicle equipped with a mixer-feeder truck body that has a width of 96-108 inches, that can sustain highway speeds of 40 to 50 mph, and that is used to transport and mix feed for dairy and beef cattle is a highway vehicle); Rev. Rul. 80-353 (multi-tank vehicle designed for transporting cement and water, mixing the cement at the job site, and pumping it into oil wells is a highway vehicle notwithstanding a maximum speed of 52 mph); and Rev. Rul. 95-40 (industrial vacuum loader vehicles with substantial job site function are highway vehicles). Compare with Rev. Rul. 77-301 (design was primarily for offhighway transportation and substantial impairment was present).

Many commodities are more expensive to transport per weight or volume than commodities such as bulk dirt or bricks because of the nature of their cargo (for example, certain cargo needs refrigeration or more careful preservation), because it is more efficient to transport several types of loads in a single vehicle, or because vehicles have both load transporting and job site functions; however, this does not constitute support for the notion that the higher cost to transport a load is because the vehicles have been specially designed for the primary function of transporting their load other than over the public highway. The cost to transport and where transportation occurs are separate concepts. Thus, the vehicles that transport a load that is more expensive to transport for reasons other than a special design for a primary offhighway purpose are not entitled to exception from the general classification of highway vehicles.<sup>4</sup> The

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<sup>4</sup> Contrary to Taxpayer's assertions, characterization as a highway vehicle does not create a harsh result as to dual use vehicles bearing in mind the Congressional intent that vehicles that use the highway bear the burden of these Highway Trust Fund (§ 9503) taxes. The cost of all mobile machinery installed on a vehicle is excluded from the § 4051 tax base on the sale of the vehicle, a low-mileage vehicle will pay proportionately lower fuel tax (and fuel used to operate mobile machinery that comes from a separate fuel tank is not subject to highway fuel tax), and § 4483(d) provides an exemption from the highway use tax for vehicles that are used on the public highway no more than 5,000 miles per year.

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instant tractors are more costly transporters not because of where they transport their load but because they are designed to transport some job site machinery and because at the completion or near completion of the transportation function they will perform job site functions and unload off the highway. See generally Rev. Rul. 79-296 (impairment characteristics were necessary in order to enable the vehicles to carry their intended load, not for offhighway purpose).

#### B. Sand dump trucks

Taxpayer argues that the sand dump trucks are not highway vehicles because they are described in § 48.4061(a)-1(d)(2)(i) as mobile machinery vehicles or in § 48.4061(a)-1(d)(2)(ii) as offhighway vehicles. We disagree.

With respect to the mobile machinery exception, the sand dump trucks do not meet any of the three mobile machinery tests. They are self-propelled vehicles that consist of a chassis to which there has been permanently mounted a body designed to transport a load. Thus, as in Rev. Rul. 95-40 and Rev. Rul. 80-353, the machinery mounted on the chassis is related to transportation on the public highways. With regard to the B test, the sand dump trucks are designed to transport a load, and with regard to the C test, the sand dump trucks can without any structural modification transport cargo. Thus, none of the three mobile machinery tests is met; accordingly, the sand dump trucks do not qualify for the mobile machinery exception.

With respect to the offhighway vehicle exception, the sand dump trucks meet neither the offhighway A or B tests. With regard to the offhighway vehicle A test, the vehicles have been built on highway-type truck chassis that meet all federal and state requirements, including weight and size requirements, braking, lighting, and other safety requirements, to transport a load over the public highways. The vehicle is denominated by Taxpayer as a “conventional cab standard service dump truck” that is designed to meet but is not limited to typical oilfield conditions. Thus, like most dump trucks, it is a highway transporter that has offhighway transportation and loading and unloading capability. Inclusion of loading and unloading equipment for a specific commodity off the highway does not evidence an offhighway transportation function; cargo is loaded and unloaded off the highway and the regulations include loading and unloading equipment as an example of machinery and equipment that contributes to the highway transportation function of a chassis or body (§ 48.4061(a)-1(a)(3)(i)). As described in Rev. Rul. 79-191 (explosives handling vehicles with separate compartments are highway vehicles) and Rev. Rul. 80-353 (multi-tank vehicle designed for transporting cement and water is a highway vehicle) the presence of several compartments or dedication to specific types of cargo does not evidence that a vehicle is designed for offhighway transportation.

With regard to the offhighway B test, the use of the sand dump trucks to transport their load over the public highways is not substantially limited or substantially impaired. The vehicles may be driven at regular highway speeds; do not require a

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special permit for regular highway use; and are not overweight, overheight, or overwidth for regular highway use. Thus, the sand dump trucks do not meet the offhighway vehicle B test. Thus, neither of the two offhighway vehicle tests is met: accordingly, the sand dump trucks do not qualify for the offhighway vehicle exception.

Taxpayer makes two arguments in favor of excepted treatment for the sand dump truck: (1) the sand is dumped at offhighway oilfield sites, and (2) the sealed walls, weather tight environment, greater expense in loading (because the sand must be blown into each compartment rather than dumped), and greater expense in unloading (because the unloading must be calibrated through pneumatic lines which provide for proper gravity feed and sand flow), make transportation of the intended commodities (particular types of sand) much less economical than a simple dump truck in terms and loading, transporting, and unloading sand.

With regard to the first argument, cargo transporters unload their cargo off the highway. As described in the above revenue rulings, numerous cargo transporters transport their cargo to and from industrial sites, and some of these also perform job site functions. See Rev. Rul. 79-191.

With regard to the second argument, that the sand dump truck at issue cannot transport the same volume of sand for the same price as a generic dump truck is not because the sand dump truck is an offhighway transporter, but because it transports several types of loads, because those loads need special handling in transit and more elaborate unloading at the job site, and because it may have some job site equipment. The greater cost of transporting sand to oilfield job sites than for a generic dump truck, is because of the inclusion of some job site machinery (which is excluded from the § 4051 tax base) and the specific handling needs of the cargo transported, not because the truck has been designed primarily as an offhighway vehicle. Many industrial dump trucks have special hydraulic or other types of devices for loading or unloading the trucks, and have some features so that the vehicles can load, transport, or dump the load on uneven terrain as many dump trucks do. They are nonetheless highway vehicles. See Western Co. of North America v. United States, 699 F.2d 264, 269 n. 6 (5<sup>th</sup> Cir. 1983) in which the Fifth Circuit upheld a jury's finding that sand dump trucks used in the oilfield servicing industry were taxable highway vehicles.

#### CAVEATS:

A copy of this technical advice memorandum is to be given to the taxpayer. Section 6110(k)(3) provides that it may not be used or cited as precedent. In accordance with § 6110(c), names, addresses, and other identifying numbers have been deleted.