SOUTH PLAINS COLLEGE
Levelland, TX

Diesel Service Technology

Thank you for your interest in South Plains College's Diesel Service Technology program.

In this information packet you will find details on what our program offers in regard to options and the paths available to choose from.

- Program Over-view: Find out what we offer
- Certificates & Degrees: What options we offer
- FAQ's: Some answers to questions you may not have thought of
- So….You want to be a diesel Tech?: A little reading to let you know what this career really involves as to levels of commitment and the rewards for sticking it out.
- Tool List: List of tools that a student is required to have while attending here.
- Textbook List: The current list of texts we use and their associated classes.

As always, you can contact us if you have any other questions or concerns.

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The Diesel Service Technology program as South Plains College offers several options for education.
All incoming students will begin in the Basic Diesel certificate level classes. This certificate is designed as an introductory level certificate. This certificate addresses an industry entry level set of skills that provide a basic foundation for advanced studies and more focused training or specialization. Classes that are taken in this first year are focused on the following areas:

- Shop Safety, Procedures, Operations & Basic Shop skills
- Basic Electrical Systems
- Basic Hydraulics
- Heating, Ventilation & Air Conditioning
- Diesel Engine Fundamentals, Operation, Rebuild
- Powertrain Fundamentals
- Brake Systems
- Troubleshooting, Diagnostic Principles

After successful completion of the Basic Diesel Certificate, a student may further their education by undertaking advanced studies that lead to specialization in either the heavy equipment (including agriculture) or the transportation (truck, bus) industry. The path for those options begins with some common courses for these areas which begins the second year of studies:

- Advanced Electrical Systems
- Electronic Controls, Computer Aided Diagnostics, CANBUS systems
- Advanced Troubleshooting & Diagnostics
- Fuel Systems & Electronic Controls / Systems

In the fourth semester, a student will undertake studies in areas that are specific to either the equipment or transportation industries:

EQUIPMENT / AG

- Advanced Hydraulics
- Powershift & Hydrostatic Drive Fundamentals
- Advanced Powershift & Hydrostats
- Elective (Engine Rebuild, Steering or Powertrain Applications)

TRANSPORTATION

- Steering & Suspension Systems
- Engine Rebuild / Overhaul
- Powertrain Applications
- Elective (Powershit & Hydrostat or Advanced Hydraulics

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If a student desires, they may simultaneously pursue an Associate of Applied Science degree in Diesel Service Technology. That is accomplished by completing 15 hours of academic studies as follows:

English - ENGL 1301 - Composition I
Math - MATH 1332 - Contemporary Mathematics (A higher level math may be taken such as College Algebra)
Speech - SPCH 1321 - Business & Professional Speech
Social / Behavioral elective (Group 80 such as general psychology PSYCH 2301)
Language / Philosophy / Culture / Creative Arts elective (Group 40 or 50 such as Intro to Philosophy PHIL 1301)

A student who is in the AAS degree program must comply with the Texas Skills Initiative (TSI) rules for basic reading, writing and mathematics proficiency. A student that is weak in those areas must take remediation courses or retest and pass in those areas before the credit courses may be taken.

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ASSOCIATE of APPLIED SCIENCE

If you are seeking a degree, your education track would include 15 credit hours in academic studies IN ADDITION to your Diesel Technology studies.

FIRST YEAR (Basic Diesel)

FIRST SEMESTER	SECOND SEMESTER
DEMR 1301 - Shop Safety & Procedures.	DEMR 1306 - Diesel Engine I.
DEMR 1305 - Basic Electrical	DEMR 1310 - Diesel Engine Testing and Repair
DEMR 1316 - Basic Hydraulics	DEMR 1317 - Brake Systems
DEMR 1323 - Air Conditioning, Heating (HVAC)	DEMR 1342 - Powertrain Applications I
MATH 1332 - Contemporary Mathematics (or higher)	ENGL 1301 - Composition I

Once you have completed the Basic Diesel, you may go on to the second year. The second year begins with a common set of courses. This third semester is heavily based on electrical, electronics and the associated systems along with troubleshooting.

THIRD SEMESTER

DEMR 1313 - Fuel Systems
DEMR 2332 - Electronic Controls
DEMR 2334 - Advanced Tune & Troubleshoot
DEMR 2339 - Advanced Electrical
SPCH 1321 - Business & Professional Speech

In the fourth and last semester, you will need to choose if you want to work on heavy equipment and ag or transportation. The courses vary between the two.

FOURTH SEMESTER

EQUIPMENT	**TRANSPORTATION**
DEMR 1335 - Powershift & Hydrostat I	DEMR 1330 - Steering & Suspension
DEMR 2335 - Advanced Hydraulics	DEMR 1349 - Diesel Engine II
DEMR 2344 - Powershift & Hydrostat II	DEMR 2345 – Powertrain Applications II
Language, Philosophy & Culture / Creative Arts elective (Core group 40 or 50)	Language, Philosophy & Culture / Creative Arts elective (Core group 40 or 50)
Social & Behavioral Science Elective (Core group 80)	Social & Behavioral Science Elective (Core group 80)

NOTE: The academic courses DO NOT have to be taken in the shown order or semester. They can be rearranged to your liking.

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CERTIFICATE of PROFICIENCY

A Certificate of Proficiency in either Equipment or Transportation begins with the Basic Diesel Certificate and will be your first year in the program.

BASIC DIESEL

FIRST SEMESTER	SECOND SEMESTER
DEMR 1301 - Shop Safety & Procedures	DEMR 1306 - Diesel Engine I
DEMR 1305 - Basic Electrical	DEMR 1310 - Diesel Engine Testing and Repair
DEMR 1316 - Basic Hydraulics	DEMR 1317 - Brake Systems
DEMR 1323 - Air Conditioning, Heating (HVAC)	DEMR 1342 – Powertrain Applications I

Once you have completed the Basic Diesel, you may go on to the second year. The second year begins with a common set of courses. This third semester is heavily based on electrical, electronics and the associated systems along with troubleshooting.

THIRD SEMESTER

DEMR 1313 - Fuel Systems
DEMR 2332 - Electronic Controls
DEMR 2334 - Advanced Tune & Troubleshoot
DEMR 2339 - Advanced Electrical

In the fourth and last semester, you will need to choose if you want to work on heavy equipment and ag or transportation. The courses vary between the two.

FOURTH SEMESTER

EQUIPMENT	**TRANSPORTATION**
DEMR 1335 - Powershift & Hydrostat I	DEMR 1330 - Steering & Suspension
DEMR 2335 - Advanced Hydraulics	DEMR 1349 - Diesel Engine II
DEMR 2344 - Powershift & Hydrostat II	DEMR 2345 – Powertrain Applications II
ELECTIVE (DEMR 1349, DEMR 1330 or DEMR 2345. DEMR 1349 is highly encouraged as choice.)	ELECTIVE (DEMR 1335 or DEMR 2335)

Diesel Technology

FAQs

Q. How will my schedule be while attending your program?

A. Typically, 8:00 to 1:40pm. There are two classes that run till about 3:00pm. Class days are Monday through Thursday.

Q. How long is the program?

A. Our program offers a Basic Diesel certificate that is one year in length. However, it is not meant to be an end point in education. Our full program is two years in length (4 semesters) and is the 'jump off' point for entry into a career. The actual calendar time may extend to one additional semester if you are on the Associate degree plan and have been required to take remedial level courses to prepare you for credit level coursework on the academic aspects of the Associate degree.

Q. Do you offer evening or summer courses?

A. No, not at this time.

Q. What is the job future?

A. Super and getting better. Currently, the demand is outstripping our graduate rate. Our past graduates have had numerous job offers to choose from, in all sorts of geographic locations and markets.

Q. How much of the training is hands-on?

A. You will only spend about 2 hours per day in the class room, with the balance of your day in the lab working on assigned projects, activities and developing a hands on learning knowledge of systems and components.

Q. Will I be certified when I complete the prescribed training?

A. No. If you are successful in your course work, you will receive a diploma (certificate) of completion. South Plains College (or any other college) does not provide a certification. However, you will be prepared to take ASE (Automotive Service Excellence) exams if you choose to. The ASE exams are available in the tuck and transportation industry but not in the equipment or agriculture machinery fields. They will count your 2 years of training at SPC as 1 of the 2 required years of field work to gain certification. ASE will provide test scores to you, but will not grant certification until the 2 years of experience has been attained. Graduate candidates of the equipment option will take an Associated Equipment Distributors (AED) exam prior to graduation and if passed, will earn student level AED certification.

Diesel Technology

FAQs

Q. What tools will I need?

A. There is a list of tools available on our the college web site under Diesel Technology. Where you get them is your choice. Price will vary widely. Expect near to a little over a $1,000.00 investment in tools.

Q. Can I attend on a part time basis?

A. While it is possible, it is not recommended. Our program is really designed around a student attending on a full time basis. Those that have tried in the past usually do not succeed on a part time basis. If you are serious about this, it is suggested that you contact an instructor and schedule a visit to thoroughly discuss this.

Q. How much reading is involved.

A. A lot! A future career in this field requires a student to acquire a lot of information. Service manuals are very specific in how things are to be done. If you are weak in reading, there is help available through our Student Services office and the Counseling department.

Q. Is this program difficult?

A. Well, that depends. The work we ask of you is not physically that difficult if you follow directions and use the correct tooling and equipment we provide as needed. Some of the subjects can be complex and some of the concepts can be difficult at first, but it gets better IF you do your part. It WILL require you to put in study time on your own or in groups (highly suggested!). One of the biggest stumbling blocks to learning that we see is when a student decides they don't want to learn it or they think it is too difficult to learn well BEFORE they actually try. It does take dedication and effort on your part.

Q. I want to try this and see if its what I want. Can I do that?

A. Sure you can. However, before you decide to do that, have a visit with us first. Getting into this program takes a substantial investment in tooling. Be certain this is what you want before you sample it.

Q. I don't learn well in a classroom and do better at hands on learning. Does your program do it that way?

A. No. Everyone that comes into this program says that. It's the nature of the business. You MUST attend classroom sessions. We do have more hands on than classroom though.

Diesel Technology

FAQs

Q. I don't want to take that math and English stuff. Do I have to?

A. Nope. The only time you are required to take the academic courses is if you are seeking an Associate of Applied Science degree. If you don't want that, then you will take the certificate route.

Q. I never made good grades in school. Can I succeed in this?

A. While it is possible, you are sure to have difficulties along the way. The machines and equipment of today are not what was around in the 70's. The systems on trucks and equipment are very complex and are heavily based on electronic controls and electrical systems. A vast majority of the problems that come to shops now are centered in those areas.

So…You want to be a diesel tech

So…You have decided that you want to be a diesel tech. That's a great choice for a career. It has a great big, wide open market of possible places of employment. It also has a very good earning potential. It's a field that isn't going away anytime soon. It has opportunities for advancement. It is very rewarding. All in all, a worthy goal. In a way, being a diesel tech is like garbage men and undertakers. Sooner or later, EVERYONE needs one, and as diesel techs, we keep this old world operating. Without diesel in your life in one way or another, everyone would be walking, naked and hungry.

Before you jump into this career path, you owe yourself a conversation and discussion on the topic of "Is this the right choice for me?". We sincerely hope it is and that you let us help you in attaining your goals.

When you consider this career, some of the questions you need to ask yourself are:

1. Why am I choosing this?
2. What do I expect to gain from it?
3. How serious am I about this?
4. Am I willing to put in the required effort?
5. Is this my choice because I think it might be an easy path?
6. Am I really ready for this?
7. Do I have the basic learning and study skills necessary?
8. What is this career really like?

Why people choose this career or education path are varied. Most want to have an opportunity to work with their hands and enjoy that aspect of it. Some genuinely love the idea of working on the big equipment, trucks and tractors. Some want a very financially rewarding career. Unfortunately, some choose it as an experiment to see if this is what they want to do. For the most part, those who undertake this as an experiment usually don't succeed. Some of the reasons they don't succeed is due to a lack of commitment, a lack of genuine desire or discovering that it really isn't for them.

You can expect (if successful) a challenging, rewarding career that can take you a lot of places both financially and geographically. You will have the opportunity to work with and on equipment that is valued at or over $100,000 up to millions. There is a lot of responsibility and expectations that go with it. If you are expecting us as instructors to stand beside you and tell you what to do step by step on how to do a particular job, you are bound for disappointment. We don't do that. We will guide you, direct you, explain how and why things are the way they are and we will try our best to help you understand those things but we will not do it for you. Also, you do not have as many chances to do it as you want. We have a limited amount of time in which to get the information, knowledge and skills into you. One of our biggest goals here is to make you a self-sufficient learner. In this business it is ABSOLUTELY REQUIRED to become one. Technology advances and changes too fast and at some point in your career, you will just have to figure out on your own how something is supposed to work…on the job.

This education path is not like taking a history, English or math class. There is a sizeable investment to be made on your part. Not just the usual tuition, books and fees, but tools, time, money and commitment. We require each student to obtain their own hand tools according to our published list. This set of tools

can easily reach $800 to $1,000 or more. As a professional technician, you will wind up buying 1,000's more in tools. Our classes are not like that math or history class that meets for a short time once or twice per week. Our classes will have you here most of the day, every day. You will be required to stay up and current with the topics in the classroom, tests (written and hands-on), assignments, and study time on your part. This program will take two full academic years to complete, plus some evening or on-line classes if you want to obtain a degree along the way. You will be expected to be here on time every day. You will be expected to be prepared and ready to learn. You will be expected to contribute to the learning process by participating in class discussion, working in small groups and being engaged in the learning process. This is college. It isn't high school. As far as grades go, we have a scale that includes A (90-100), B (80-89), C (70-79) and F (0-69). There are no D's in this. This grade scale is based on industry and what they consider passing on manufacturer specialized training.

At this point, let's discuss a little red wagon. You know the one I'm talking about. Many of us had one as a child that was pulled around hauling who knows what. Here, you come with an empty one. We put things into it throughout the semester such as Ohm's Law, how to use a volt meter, how to use a micrometer or other precision measuring device, engine theory, gear theory, fuel systems, etc. As you progress, the wagon gets a bit fuller. At the end of the semester, you DO NOT get to empty the wagon in preparation for the next semester. You have to come in with a second empty wagon behind the first (now full) one. This process continues for two more semesters. What we learn from one semester to the next is a progression. First is concepts, principles and facts. Then come the application of those facts to various situations. When you finish here, you move into that first job. On that first job, your wagons have now become a large dump truck, only partially full. As you progress in the career, you learn more that goes in there. This process continues.

Everyone has had that time in our lives (if we are honest about it) that we just quite couldn't or wouldn't finish what we start. It may have been something as small as a set of book cases that we never got around to or finished. This two year investment will take commitment on your part. It is not an easy path, but it IS something that can be accomplished if you are really intent on being a success. We have probably all heard the saying "you can lead a horse to water, but you can't make him drink". That is very appropriate here. We provide the water, but if you aren't willing to drink of what we put forth, you are going to be wasting your time, your money and end up very disappointed.

Over the years, we have held an often repeated conversation with high school counselors that goes something like this: Well, I have a student who isn't exactly college material, but I think they could be a decent mechanic. Our question then is this: Let's suppose for a moment that this student is in the 'C' to 'D' range. If this student were to somehow make it through our program (C level), would you feel good about them working on your brake system or steering system? That may be a harsh type of answer, but its purpose is to put it all into perspective. This business requires quality and attention to detail. As mentioned before, many of these machines are very costly. A customer or service facility isn't likely to trust someone who is lacking in quality or attention to detail the responsibility of repairing that expensive machinery. This isn't meant to stop you from the career, but to let you know what awaits and what is required to get you ready for that career. A good future tech must have good reading, solid in basic arithmetic, communication and interpersonal skills. Above all, you have got to be a thinker.

A good entry level technician must be able to work with others and communicate to the customer, management and others what you found, how you fixed it and what caused the problem. A customer's equipment that is being repaired under a warrantee situation has a need for good communication skills

on your part. A technician in that situation MUST be able to accurately describe what the exact problem was determined to be, exactly how it was located and repaired. Failure to do so could result in the shop and the technician missing out on pay for the job. Some of that we can help you develop along the way, but if you really struggle with reading and comprehension, this is going to be a real battle for you. Get yourself ready, then… come see us. You must be able to follow specific, detailed instructions. Many service manuals have pictures, but it isn't the picture that's the instruction. It's the words written about the picture that convey the information. Most manuals and other service literature are written on a 12th to 13th grade level. Sorry, they don't make the comic book version of how to repair a Cummins engine…or any other item for that matter, nor do they come on audio tapes nor is anyone going to read it to you.

While attending here, we try to get you accustomed to what the employer expects: Punctuality, dedication, willingness to do what is expected, and doing it correctly. Don't expect an employer to give you a raise after 3 weeks because you showed up for work. They don't do 'show-up' awards or participation trophies. We expect you here, on time for every class session. This isn't free and you have made an investment or someone has graciously paid it for you (think 'parent', 'friends', 'relatives' and 'tax payers').

The physical work of doing the jobs we have in store for you are not hard, but they do require attention to detail. What can be hard though is learning the theory of why and how. We need students who have good reading and basic arithmetic skills. A good student will also be able to devote their time and energy to learning. You may think that two years is a long time, and on the calendar it may seem so. In reality, the two years will go by very quickly. We have 16 weeks per semester. That is a short time to try and instill an understanding of basic electrical systems, hydraulics, air conditioning / heating / ventilation systems and a large collection of other items that you will need to know just to make your second, third and final semesters possible or potentially successful. And note…that is the first semester. After that they just get deeper and more involved in other topics such as electronic controls, fuel injection, trouble-shooting, diagnostics, transmissions, engines…and MORE electronics, controls and hydraulics.

The machines we work on now are more complicated and dependent on computer controls than ever before and are only getting more so. Now don't think that you have to be a Microsoft computer programmer. That isn't what we mean. You do have to be able to work competently with a computer though. As stated, the work isn't that hard, but the concepts can be. We will help you on that…IF you are willing and put out the effort on your part.

If you really want to know what this career actually involves, it is strongly suggested that you pay a visit to several repair facilities and do a little looking, questioning and observing. It will be time well invested.

Let's get this one out and in the open now; you WILL get dirty, greasy, and nasty and more than likely pick up a few nicks and scratches. It's all part of the game. Employers will have you doing some repairs that you just don't like. If your favorite thought is that you want to rebuild 'motors' (they are actually engines), the reality in that is that it's not what you think. Many are just exchanged. The engine (you say motor, we say engine) is only a producer of power. After that there are electrical, hydraulic, accessories, transmissions, axles, brakes, steering, leaks, low power, excess smoke, rattles, squeaks, kerthunks, kerchunks, no shifts, poor shifts, and much more. Some of them will be difficult to locate, troublesome to access and a downright pain to repair. Some repairs may be done in the middle of a cotton field, in the bottom of a dirt pit or on the side of the highway lined on the shoulders by grass burrs…at night.

But guess what? You are expected to do it and do it right. An employer, when after seeing that you have been a diligent student and a good example of an entry level tech, might make a choice to provide you with product or manufacturer specific training. If you get this opportunity, you will be expected to attend a fast and intense short (between 2 days to a week) training session. This may cover the entire electronic control system utilized on a vehicle and it's all done in 2 or 3 days. It might be the latest changes in a system, the features and pitfalls of a new engine or the servicing of the entire machine. Remember…in 2-4 days. These are usually paid for by the employer, you are provided transportation to and from, lodging, meals, your regular pay and the opportunity. In return, the boss expects you to learn the information then be able to do what they just paid $1,000 or more for. Come back, do it and prove to them you can and are a good employee and you may be going on to more of those little school sessions. Add some time and more experience and one day you may be the service manager, foreman, or manager. Who knows…maybe even owner.

Now…having read all of this, take some time. Think it over and be honest with yourself. Is being a diesel repair technician what you really want to do and are you certain this is what you would consider your 'life's calling'? If so, then congratulations! If not, then you may want to consider something else as your career. It has often been stated "Oh…you can be anything you want to be!". Well, the real truth is that no, that isn't true. That statement is not being mean, it's being honest. Not everyone is cut out for this. You have to have the desire, drive, motivation, dedication and basic learning skills it takes to get there.

We want to see you succeed and we will do all within our ability to help get you there, but we can't do it for you and we won't. The real success begins with you and your desire to succeed. Half-hearted efforts give poor returns. There are services available to help you with some of the basic skills, and they can read the test to you, give you extra time to complete it, provide extra privacy while you do it, etc., but in the real world, none of that exists. Employers won't read the service manual nor give you extra time to complete the task at hand or make it a private repair shop. They will expect you (with gained experience) to be able to competently make a repair without their supervision, assistance or explanation.

Our best wishes and hopes are extended for you and your future, whatever it may be. We want it to be the right choice for you. One that will bring you what you hope for.

If we are in your future, then please…come and visit us, talk to us. See what we do and how.

Sincerely,

South Plains College

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DST Student Tool Kit

This list is divided into REQUIRED and OPTIONAL. The source for the tools is entirely your choice. Some suggestions are Craftsmen, Harbor Freight, Snap-on, Mac, Cornwell. Prices and quality vary. If you are 110% certain that being a diesel tech is your lifes calling, then consider your tools as an investment, not an experiment.

REQUIRED of all students entering the Diesel Technology program:

Tool box	Should be lockable and large enough to adequately hold the tools on this list. Extremely large boxes are discouraged due to space available.
12 pt inch combination wrench set	1/4" through 1-1/4"
12 pt metric combination wrench set	7,8,9,10,11,12,13,14,15,16,17,18,19,21mm sizes
1/2" drive ratchet / socket set	INCH SIZES: 7/16 through 1-1/4, 12pt METRIC SIZES: 9 through 18mm, 12 pt Ratchet Breakover bar 6" extension
3/8" drive ratchet / socket set	INCH SIZES: 1/4 through 7/8, 12 pt Ratchet 6" extension
1/4" drive ratchet / socket set	INCH SIZES: 3/16 through 1/2 deep (12 pt preferred) METRIC SIZES: 4 though 13mm Ratchet Spinner handle (like screwdriver handle to accept sockets)
Pliers (6)	10" Water pump pliers (tongue & groove) 6" slip joint pliers 5-1/2 to 6" sized long nose pliers (needle nose) 7 to 8" diagonal cutters 8 to 10" curved jaw locking pliers (like Vice Grip style) Electrical strip & crimp tool
Snap Ring Pliers (3)	3 sizes, fixed tip (not interchangeable tips) convertible type (internal-external) (small straight tip, medium straight tip, medium 90 degree tip)
Screwdrivers	Straight Blade: 1/8, 3/16, 1/4, 5/16 width, various lengths Phillips: 0,1,2, various lengths
Hex (Allen) wrenches	INCH: .028, .035, .050, 1/16, 5/64,3/32, 7/64, 1/8, 9/64, 5/32, 3/16, 7/32, 1/4, 5/16, 3/8 METRIC: 1.5, 2, 2.5, 3,4,5,6 mm
Hammers	16 oz Ball-pein

	2 Lb soft faced dead blow
Punches & Chisels	Cold chisel, 1/2" width, 5-6" length Center punch, 5-6" length 3/16" pin punch, 5-6" length
Bars	Rolling Head Pry Bar, 15 x 1-15/16 head Pinch Bar, 15 -16" length
DVOM	Digital Volt Ohm Meter (Fluke 115 preferred, but brand not required) **MUST** be auto-ranging and have 10 Megohm or greater impedence
MISC.	Feeler blade set: .0015" through .035", angled blade type Heavy bladed gasket scraper (a 3/4 to 1" wood chisel slightly dulled can serve here) Tape measure 6' minimum Inspection mirror (2-3" mirror, extendable) Hook and scribe (o-ring pick) Magnetic pick-up tool, extendible or flexible Flashlight (a good pocket size is ok) Pocket or utility knife (sharp..please) Torque Wrench: Beam type, 0-150 Ft. Lb. (may substitute from optional list)
Safety Equip.	Safety glasses: Must be ANSI Z87 or better, clear or light yellow, NO mirrored Steel toe safety boots (composite type ok)

OPTIONAL may be added if desired:

1/2" drive	INCH SIZES: 6 pt 7/16, 1/2, 9/16 (or full set of 6 pt) 12 pt deep 1/2 through 7/8 (or full set of deep 12 pt) METRIC SIZES: 6pt metric 12 pt deep Additional extensions Speed handle Universal joint
3/8" drive	INCH SIZES: 6pt deep 3/8 through 7/8 6pt flex 7/16, 1/2, 9/16, 5/8, 3/4 Spark plug 13/16, 5/8 METRIC SIZES:

	6pt 10 -18 Universal Joint Additional extensions
1/4” drive	INCH SIZES: 3/16 through 1/2 standard depth, 6 pt METRIC SIZES: 4 through 13mm deep 6 pt or 12pt Additional extensions Universal Joint Flex sockets
Flare Nut Wrenches	3 piece flair nut wrench set 3/8x7/16, 1/2x9/16, 5/8x11/16 3 piece metric flair nut wrench set 11x12mm, 13x14mm, 15x17mm
Torx	Torx Key set T-7, T-8, T-9, T-10, T-15, T-20, T-25, T-27, T-30, T-40, T-50, T-55
Hammers	3 Lb. engineer or cross-pein 8 oz. Ball-pein
Puches & Chisels	Full set (11 – 14 pieces) Brass Drift 6 to 10” size
MISC	Angled feelers (tappet set) .008 through .026” 0-1” micrometer 0-6” Caliper 12” Pipe wrench Torque Wrench: 30-250 Ft. Lb. adjustable, ratchet type (may sub this for beam type on required) Torque wrench: 50-250 In. Lb. adjustable, ratchet type Torque wrench: 10-150 In. Lb. beam type Stepped type feeler gauge (go / no-go) set
OTHER	Anything else that you think may be handy that is not a prohibited item.
COMPUTER	This item is strongly recommended, but not required. We have many manuals, bulletins, instruction and work sheets that will need to be used. Many of these are in electronic format. A good tablet or laptop will suffice if you choose to have one.

PROHIBITED ITEMS:

1) Adjustable wrench (usually referred to as a Crescent wrench)
2) Test light probes
3) Impact wrenches (air or electric)

SOUTH PLAINS COLLEGE - DIESEL SERVICE TECHNOLOGY

Current Textbooks (effective Fall 2019)

TITLE	AUTHOR	PUBLISHER	ISBN	USED IN:
Fundamentals of Medium/Heavy Duty Diesel Engines	Gus Wright	Jones & Bartlett Learning – CDX Automotive	9781284067057 (hardcover) List: $131.95 (as of 1/9/19)	DEMR 1306 DEMR 1310 DEMR 1313 DEMR 1349 DEMR 2332 DEMR 2334 DEMR 2379
Fundamentals of Mobile Heavy Equipment	Duffy Heard Wright	Jones & Bartlett Learning – CDX Automotive	9781284112917 (hardcover) List: $131.95 (as of 1/9/19)	DEMR 1316 DEMR 2335
Tasksheet Manual for Fundamentals of Mobile Heavy Equipment	Wright	Jones & Bartlett Learning – CDX Automotive	9781284154764 List: $69.95 (as of 1/9/19)	ALL DEMR COURSES
Fundamentals of Medium/Heavy Duty Commercial Vehicle Systems	Duffy / Wright	Jones & Bartlett Learning – CDX Automotive	9781284041163 (hardcover) List: $131.95 (as of 1/9/19)	DEMR 1301 DEMR 1305 DEMR 1317 DEMR 1323 DEMR 1330 DEMR 1342 DEMR 2345
Heavy Equipment Power Trains and Systems	Dell	Goodheart-Willcox	978-1-63563-228-6 List: $130.00 (as of 1/9/19)	DEMR 1335 DEMR 2344

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