NORTH DAKOTA STATE COLLEGE OF SCIENCE

DIESEL TECHNOLOGY

Case IH

Dealer and Student Information

NDSCS.edu/Case-IH

NDSCS

CONTENTS

Diesel Technology - Case IH is a two-year program leading to an Associate of Applied Science Degree. It is sponsored by the North Dakota Case IH participating dealers and is operated by North Dakota State College of Science in Wahpeton, North Dakota.

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The North Dakota State College of Science is accredited by The Higher Learning Commission, 230 South LaSalle Street, Suite 7-500, Chicago, IL 60604, 800-621-7440.

PARTICIPANT RESPONSIBILITIES

The Diesel Technology – Case IH Program is a partnership between the North Dakota State College of Science, participating North Dakota Case IH dealerships and participating students. Each has the following responsibilities in this partnership:

NORTH DAKOTA STATE COLLEGE OF SCIENCE

- Maintain a current curriculum approved by participating dealers.
- Provide classroom and laboratory facilities.
- Provide teacher-coordinator and instructors; the teacher-coordinator acts as a liaison between NDSCS and Case IH dealer representatives.
- Provide equipment and tools.
- Promote, advertise and recruit qualified students.
- Assist dealers with student selection.
- Maintain all student records.
- Provide academic, financial aid, and counseling services and advisement.
- Visit students during internships to assure attainment of work experience competencies.
- Furnish program information to dealers, students and the general public when requested.
- Provide an Associate of Applied Science Degree in Diesel Technology – Case IH.

CASE IH DEALERSHIP

- Interview and select a student to sponsor.
- Appoint an in-dealership coordinator or supervisor to work with NDSCS's teacher-coordinator in planning and monitoring the internship.
- Pay trainee's wages, commensurate with experience, during periods of internships.
- Provide the sponsored student with uniforms in a manner consistent with other dealership employees. Students will wear uniforms (shirt and pants) at both school and work.
- Provide work experience that will increase the students' skill level.

STUDENT

- Demonstrate high school graduate or equivalent.
- Apply for admission to NDSCS.
- Obtain and maintain a North Dakota Case IH dealership sponsor.
- Maintain NDSCS academic standards and adhere to academic policies.
- Wear Case IH uniforms and safety glasses while on campus and during internship at the sponsoring dealership.
- Participate in all learning activities and experiences at the scheduled times.
- Provide the sponsoring dealership with responsible and productive employment.
- Pay for program costs - tuition, fees, books and tools.

INTRODUCTION

The Diesel Technology – Case IH program is an Associate of Applied Science degree (A.A.S.) that is designed to develop technically competent, professional service technicians.

Students receive state-of-the-art technical training on Case IH agricultural equipment and related products through a combination of classroom instruction, hands-on laboratory instruction, and cooperative educational work experience at a participating Case IH dealership.

The Diesel Technology – Case IH program takes five semesters or approximately 20 months to complete. The five semesters are divided into nine terms, each approximately eight weeks in length. Students complete the 1st, 2nd, 3rd, 5th, 7th, 8th and 9th terms on campus. They complete the 4th and 6th terms at a sponsoring Case IH dealership.

Classroom and laboratory instruction at NDSCS covers the basics of each subject plus the latest developments in Case IH equipment. Work experience at the dealership is structured to relate to the most recent classroom subjects covered at NDSCS and includes projects to improve the student's skill level.

Students are required to obtain a sponsor from an authorized Case IH dealership. Students can request assistance in locating a sponsoring dealer, and dealers can request assistance in locating a student to sponsor.

Dealers are responsible for providing students with employment and challenging repair projects during the work experience periods. Students are responsible for tuition, fees, textbook and tool costs.

DIESEL TECHNOLOGY – CASE IH PROGRAM

(24 months) (AAS Degree)

CURRICULA (FIRST YEAR)

FALL SEMESTER		Credits
1st Term 1st 8-weeks mid-August thru mid-October		
DTEC 164	Introduction to Mobile Hydraulics	4
DTEC 101	Science of Success: Intro to Diesel	1
DTEC 109	Air Conditioning for Diesel Technology	2
2nd Term 2nd 8-weeks mid-October thru mid-December		
DTEC 115	Introduction to Light and Medium Duty Engines	4
MATH 120	Basic Mathematics I	2
CIH 106	Case IH Shop Service Management	2
HPER 210	First Aid and CPR	2
SPRING SEMESTER		**Credits**
3rd Term 3rd 8-weeks mid-January thru mid-March		
DTEC 125	Introduction to Heavy Duty Drive Systems	3
ENGL 105	Technical Communications	3
DTEC 155	Electricity for Diesel Technology	4
4th Term 4th 8-weeks mid-March thru mid-May		
CIH 110	Case IH Internship	4

Class schedule may change without notice.
Dates will coincide with academic calendar.

CURRICULA (SECOND YEAR)

SUMMER SEMESTER		Credits
5th Term June-July		
CIH 225	Case IH Powertrains	4
CIH 216	Case IH Equipment Operation and Adjustment	4
FALL SEMESTER		**Credits**
6th Term 1st 8-weeks mid-August thru mid-October		
CIH 210	Case IH Internship II	4
7th Term 2nd 8-weeks mid-October thru mid-December		
PSYC 100	Human Relations in Organizations	2
MATH 123	Basic Mathematics II	2
CIH 265	Case IH Hydraulic Systems Diagnostics	5
CIS 101	Computer Literacy	2
SPRING SEMESTER		**Credits**
8th Term 3rd 8-weeks mid-January thru mid-March		
MFGT 110	Industrial Shop Practices	2
CIH 215	Case IH Engine Rebuild	6
9th Term 4th 8-weeks mid-March thru Graduation		
MATH 125	Basic Mathematics III	2
CIH 255	Case IH Electrical/Electronics	5
CIH 260	Case IH AFS (Advanced Farming Systems)	3

COURSE DESCRIPTIONS

CIH 106 Case IH Shop Service Management (2 credits)
This course covers operational policies followed by the dealership service department. Included will be discussion on shop service management, publications, tech manuals, ASIST (Technical Information Reference Tool) and eTIM (Electronic Technical Information Manual).

CIH 110 Case IH Internship I (4)
The student will receive on-the-job experience at a Case IH dealership. This will consist of performing basic repair procedures in the service department. This internship will occur the fourth 8-weeks of the first year. (S)

CIH 210 Case IH Internship II (4)
The student will receive on-the-job experience at a Case IH dealership. This will consist of performing basic repair procedures in the service department. This internship will occur the first 8-weeks of the second year. (F)

CIH 215: Case IH Engine Rebuild (6)
A theory and lab course covering Case IH engine operating principles, cylinder and piston service, valve service, crankshaft and bearing service, lubrication systems, rebuilding procedures, measurement fundamentals and basic engine troubleshooting. Prerequisite: DTEC 115 (F)

CIH 216 Case IH Equipment Operation and Adjustments (4)
This course will cover the operation, adjustments and repair of Case IH harvesting and planting equipment. Equipment inspections and calibration is included in this course. Students may operate and make field adjustments to this equipment for optimum performance, conditions permitting. (Su)

CIH 225 Case IH Power Trains (4)
A lab/lecture course covering the power train systems used in Case IH equipment. Mechanical shift, power shift and CVT transmissions will be covered in this course. Students will disassemble, reassemble, adjust and test these components found on Case IH equipment. (Su)

CIH 255 Case IH Electrical/Electronics Diagnostics (5)
This course involves the understanding of electrical sensors, actuators, and computer operation which is applied to Case IH equipment. Techniques of circuit diagnostics will be demonstrated and practiced using the electrical diagnostic manual, DVOM, test light, and special manufactures tools. Electrical work will involve the Case IH equipment which utilizes electronics to control mechanical operation. The student will perform hands-on testing, computer diagnostics, and calibration of various Case IH components and equipment.

CIH 260 Case IH Advanced Farming Systems (AFS) (3)
A lab/lecture course designed to introduce the student to the Case IH Advanced Farming Systems (AFS). Basic GPS equipment guidance systems, operation and diagnostics will be utilized. Types of GPS signals and their applications currently used by Case IH Accuguide systems will be covered. AFS display setup and applications used on current Case IH equipment will be performed.

CIH 265 Case IH Hydraulic Systems (5)
A lab/lecture course covering the diagnostics, service and repair of the hydraulic functions on Case IH agricultural and mobile equipment. Open-center, closed-center and load sensing systems are covered as well as steering, hydrostatic drives and hydraulic functions of Case IH equipment.

DTEC 109 Air Conditioning for Diesel Technology (2)
A lecture, discussion and lab-type course covering the design and principles of operations of various air conditioning systems, including agriculture, construction and trucking equipment. Work in lab consists of leak detecting, evacuation, reclaiming, charging, component comprehension, electrical systems and troubleshooting for various units.

DTEC 115 Introduction to Light and Medium Duty Engines (4)
A theory and lab course covering rebuilding of heavy duty gas and light- and medium-duty diesel engines. Students will troubleshoot, disassemble, rebuild and assemble an engine during this class. Learning modules include: measurement fundamentals, basic engine operating principals, cylinder and piston service, cylinder head rebuilding and valve reconditioning, crankshaft and bearing service, and lubrication and cooling systems. Engines designed for the use of alternative fuels such as LPG and CNG are also covered. This class is a prerequisite for DTEC 215, CIH 215 and JDAT 215.

DTEC 125 Introduction to Heavy Duty Drive Systems (3)
A lecture and lab type course which provides the student with theory and hands-on operation and repair of shop safety, operation, bearings-seals, heavy duty steer axles, drive axles, medium and heavy duty truck suspension, wheel end assemblies. This is a 3 credit, 8-week course and 80-hour class. (F, S)

DTEC 155 Electricity for Diesel Technology (4)
An introductory lab/theory class in electrical fundamentals. A practical approach to the study of electricity including Ohm's Law, power, series and parallel circuits, direct and alternating current, with strong emphasis on diagrams and troubleshooting. This class is designed for technicians in the Diesel Technology field. (F, S)

DTEC 164 Introduction to Mobile Hydraulics (4)
This course is a study of hydraulic system fundamentals and various components used in a typical mobile hydraulic system. Component disassembly and reassembly will take place to aid in the understanding of component and system operation. Various components will be tested on a test bench to help the student understand how the components contribute to the overall operation of the system and will be used to evaluate the students' performance. Experiments will be performed on lab equipment to aid in the understanding of mobile hydraulic principles.

MFGT 110 Industrial Shop Practices (2)
An introduction to the procedures and practices used to develop fundamental industrial shop skills. Students enrolled in this class will learn and apply a variety of practical skills used to aid in any entry level industrial mechanical service occupation. The topics covered in this course are: general shop safety; MIG welding set-up and operation as well as welding simulation; Oxy-Fuel torch set-up and operation; basic measuring methods using tape measures, rulers, calipers, and micrometers; identification of SAE and ISO metric measuring systems; proper use and identification of basic shop tools; identification of twist drills and sharpening; identification and use of hand taps; fastener type and grade identification; Helicoil insert use; bolt extraction; properly demonstrate the use of mechanical type torque wrenches; properly demonstrate the use of electronic type torque wrenches; properly demonstrate the ability to torque according to industry standards.

CIS 101 Computer Literacy (2)
This course is designed to provide non-Computer Science majors with an introductory-level course in computer usage that prepares them for contemporary work environments. It is a hands-on lab-based course intended to introduce the student to the Windows operating system, Word, Excel, and PowerPoint. Windows PC required. (Credit awarded for CIS 101 or CSCI 116, not both.) (F, S, Su, O) ND:COMPSC

DTEC 101 Science of Success: Intro to Diesel (1)
This is a practical one-credit course that provides the tools and skills necessary to get a strong start with the transition for new students at NDSCS. This course will introduce the students to campus resources, policies and procedures and cover topics such as time management, study skills, goal setting, wellness, financial literacy, and professional development. (F, S, O)

ENGL 105 Technical Communications (3)
This course concentrates on business correspondence, informal report writing, technical communication, job preparation, and oral presentation. Prerequisite: Placement test. (F, S, Su-O)

HPER 210 First Aid and CPR (Professional/Community) (2)
Provide students with the knowledge and skills necessary to respond to an emergency. Preparing students to identify, assess, manage and minimize consequences of injury (minor and major) and sudden illness in medical emergencies. Providing options for professional level of training, this course is outlined by the American Heart Association and will follow those guidelines. Certificate cards are given upon request and only after successfully completing the course. The student must score at or above the 84th percentile on all written exams for certifications. Training skills for the professional AHA BLS, AED, and first aid. AHA Heart Saver CPR training may be available upon request.

MATH 120 Basic Mathematics I (2)
A review of whole numbers, fractions and decimal numbers in conjunction with the fundamental application of ratios, rates, unit rates, proportions, and percentages in solving everyday problems. Business and consumer mathematics such as simple interest, compound interest, and purchasing. (F, S)

MATH 123 Basic Mathematics II (2)
Introduction of statistical data reading and calculating. Problem solving involving length, width, and capacity in the U.S. and metric systems. Application problems involving perimeter, area, volume, and fundamental geometry. (F, S, Su)

MATH 125 Basic Mathematics III (2)
Basic concepts and features of beginning algebra with an emphasis on critical thinking and problem solving. Topics include properties of real and rational numbers, arithmetic operations of numbers and expressions, translating verbal expressions/equations to variable expressions/equations, and application of word problems. (F, S)

PSYC 100 Human Relations in Organizations (2)
This course focuses on building successful and effective interpersonal relationships within organizational and other social environments. It includes an examination of human relations in business and industry with emphasis on how people can work effectively in groups to satisfy both organizational and personal goals. Motivation, emotional and mental health, communication techniques, and coping with stress are explored. Activities are used to encourage the application of concepts to enhance personal growth and insight and to increase social skills. (F, S, Su-as needed, O) ND:SS

STUDENT ADMISSION AND SELECTION PROCEDURE

Students enroll in the Diesel Technology – Case IH program at the beginning of fall semester. Students are accepted into the program upon completion of admission into NDSCS. Students should do the following:

Apply for admission to NDSCS through the Enrollment Services office. Enrollment Services will not accept faxed applications for any program.

- Submit high school transcripts or GED to Enrollment Services.
- Visit NDSCS and complete orientation (testing, academic advising and scheduling, and registration).
- Secure approval from a participating dealer.

ADMISSIONS

Students should contact the NDCS Enrollment Services office (701-671-2173) to receive information on the college, financial aid and housing. Students should complete the applications and return them to NDSCS promptly.

HIGH SCHOOL OR GED TRANSCRIPTS

Applicants must demonstrate completion of high school or GED equivalency. Students should contact their high school guidance office and request that their transcript be submitted to NDSCS Enrollment Services.

ORIENTATION

All freshmen must complete an orientation. Orientation includes a tour of the NDSCS campus, financial aid counseling, scheduling (academic advising) and registration.

SPONSOR APPROVAL

Applicants must complete an interview with and secure approval of a sponsor. The applicant is responsible for obtaining a sponsor. Applicants should take the Dealer Approval Form to a potential sponsor. Complete the approval form and return it to Enrollment Services if it is determined that the dealer will grant sponsorship. If the dealer decides not to grant sponsorship, then the student should contact the NDSCS coordinator for assistance in securing a sponsor.

COLLEGE EXPENSES

Contact the Director of Enrollment Services for tuition costs. Out-of-state students in a partnership program will pay the in-state tuition rate. The exception is Minnesota students who pay the agreed-to reciprocity rate.

NOTE: All tuition, fees, room and board costs are tentative and are subject to change. Personal costs are rough estimates of personal spending. Contact the NDSCS Enrollment Services office for a current information sheet.

CONTACT INFORMATION

Dealers and students should direct all inquiries to the following North Dakota State College of Science Primary contacts.

Mike Redding
Program Coordinator
Diesel Technology – Case IH
701-671-2226 or
800-342-4325 ext. 3-2226
Michael.Redding@ndscs.edu

Terry Marohl
Department Chair – Diesel Technology
701-671-2308
Terry.Marohl@ndscs.edu

Jenny Schmitt
Program Assistant – Diesel Technology
701-671-2330
Jenny.Schmitt@ndscs.edu

ELIGIBLE DEALER LOCATIONS

Case IH agricultural equipment dealers located anywhere in the U.S. are eligible to sponsor students at NDSCS.

Students should contact a local Case IH dealer to see if the dealer is interested in sponsoring a student. They can contact the NDSCS coordinator for a list of approved Case IH dealers.

- **Arnold's Inc.**
  Alden, Minn.
  Glencoe, Minn.
  Kimball, Minn.
  Mankato, Minn.
  St. Cloud, Minn.
  St. Martin, Minn.
  Willmar, Minn.
- **Hanson's Auto and Implement Inc.**
  Cavalier, N.D.
  Grafton, N.D.
- **High Plains Equipment**
  Carrington, N.D.
  Devils Lake, N.D.
  Harvey, N.D.
  Rugby, N.D.
- **Miller-Sellner**
  Bingham Lake, Minn.
  Fairmont, Minn.
  Slayton, Minn.
  Sleepy Eye, Minn.
- **Plains Ag**
  With locations in North Dakota, Montana, Kansas and Colorado
- **Titan Machinery Inc.**
  With locations in North Dakota, South Dakota, Minnesota, Nebraska and Iowa
- **Trueman Welters Inc.**
  Buffalo, Minn.

FINDING A SPONSOR

Note: You may speak to any participating dealership at any time about the Diesel Technology – Case IH Program. You are accepted into the program only after official acceptance occurs, after all assessments, applications and dealer sponsorship forms have been approved by the North Dakota State College of Science.

KEY POINTS TO REMEMBER:

- Case IH dealerships are independent businesses.
- They are not employees of Case IH.
- When looking for a sponsor, you are looking for a CAREER – act and dress accordingly.
- North Dakota State College of Science and the Diesel Technology – Case IH Coordinator will provide assistance and guidance and identify interested dealerships.
- We do not assign you a dealership.
- As a Diesel Technology – Case IH student you will be an employee and a student, although the two should never conflict.
- Some dealerships may choose not to participate.
- The dealership may choose to formally interview you as a candidate for the Diesel Technology – Case IH Program.
- Be prepared
  - Be neat and clean in appearance.
  - Be confident of your goals and skills.
  - Complete your part of the application as neatly as possible before the interview.
- Your first priority should be convincing the dealer that you will make a good employee.
- You may speak to the dealer (owner), general manager or service manager.
- If you are not sure whom to see, ask for the dealer first, then the service manager.

If you are sure that you want to be in the Diesel Technology – Case IH Program, be confident and get busy right now. Don't be discouraged if your first attempt doesn't land you a sponsor!

SPONSOR APPROVAL OF STUDENT

DIRECTIONS TO THE STUDENT

Fill in your name and address in the lines below. Then, take this Sponsor Approval Form to the Case IH dealer for approval of the sponsorship.

Student's Name _____

Street Address _____

City, State, Zip _____

Phone _____

DIRECTIONS TO THE DEALER

_____ I agree to provide sponsorship for the above student in the Diesel Technology – Case IH Program at NDSCS.

Dealership _____

Street Address _____

City, State, Zip _____

Phone _____

Authorizing Representative _____

Date _____

Internship Location _____

STUDENT RELEASE OF INFORMATION FORM

I hereby grant permission to North Dakota State College of Science to share my high school transcripts, pre-admission test results, interview data, and college grades and progress reports with the sponsoring Case IH dealership.

Student Signature _____

Street Address _____

City, State, Zip _____

Date _____

Return this completed form to:
NDSCS Enrollment Services
800 Sixth St. N.
Wahpeton, ND 58076

CORRESPONDENCE

All correspondence should be directed to the following address:
Diesel Technology – Case IH
Enrollment Services
North Dakota State College of Science
800 Sixth St. N.
Wahpeton, ND 58076

STUDENT TOOL LIST

Students are responsible for purchasing or providing their own tools. Below is a list of required tools for the program. These tools can be purchased from NDSCS at a substantial discount through the Bookstore. Find more information at **NDSCSbookstore.com.**

QTY	DESCRIPTION	CATALOG #	VENDOR
1	6 pc., 3/8" Dr., Comb. Square Adapter Set	1206GS	Snap-On
1	11 pc., 3/8" Dr., 12 pt. Sae Deep Socket Set	211SFY	Snap-On
1	12 pc., 3/8" Dr., 12 pt. Metric Shallow Socket Set	212FMY	Snap-On
1	12 pc., 3/8" Dr., 6 pt. Metric Deep Socket Set	212SFSMY	Snap-On
1	18 pc., 3/8" Dr., 12 pt. SAE Shallow General Service Socket Set	218AFP	Snap-On
1	13 pc., 1/2" Dr., 12 pt. Metric Shallow Socket Set	313SWMYA	Snap-On
1	17 pc., 1/2" Dr., PT SAE General Service Socket Set	317MSPC	Snap-On
1	Strap Oil Filter Wrench	A91F	Snap-On
1	Stainless Steel Wire Brush	AC59C	Snap-On
1	Female Quick Coupler	AHC24D	Snap-On
4	Male Air Line Adaptor	AHC24MD	Snap-On
1	12" Adjustable Joint Pliers	AWP120	Snap-On
1	9 pc. Metric Ball Hex Wrench Set	BHM9A	Snap-On
1	13 pc. SAE Hex Wrench Set	BHS13A	Snap-On
1	Curved Locking Jaw Pliers	BLP10	Snap-On
1	62 pc. 1/4" Dr. SAE/Metric General Service Set	BLPGSS1462	Snap-On
1	87 pc. Torx® & Hex Bit Socket Set	BLPTHC87	Snap-On
1	16 oz. Ball Peen Hammer	BPN16B	Snap-On
1	0-1" Micrometer	CNT3M101	Snap-On
1	14-1/8" Rigid Carbon Scraper	CSA14C	Snap-On
1	Bent Blade Feeler Gauge Set	FB300A	Snap-On
1	38 pc. Straight Feeler Gauge Blade Set	FBST338	Snap-On
1	Dual-Foot Air Chuck	GA356B	Snap-On
1	Dial Indicator Extension	GA3601	Snap-On
1	Magnetic Base Dial Test Indicator Set	GA3640A	Snap-On
1	Black Frame Safety Glasses	GLASS31BK	Snap-On
1	48 oz. Soft Grip Dead Blow Hammer	HBFE48	Snap-On
1	4 lb. Hand Drilling Fiberglass Hammer	HD4SG	Snap-On
1	Blow Gun	JT13B	Snap-On
1	5/16" 12 pt. Combination Wrench	OEX10B	Snap-On
1	14 pc. 12 pt. SAE Combination Wrench Set	OEX714KB	Snap-On
1	6mm 12 pt. Metric Short Combination Wrench	OEXM6B	Snap-On
1	10 pc., 12 pt. Combination Metric Wrench Set	OEXM710B	Snap-On
1	7mm 12 pt. Metric Short Combination Wrench	OEXM7B	Snap-On
1	8mm 12 pt. Metric Short Combination Wrench	OEXM8B	Snap-On
1	9mm 12 pt. Metric Short Combination Wrench	OEXM9B	Snap-On
1	4 pc. Prybar Set	PBS704	Snap-On
1	Pencil Tire Pressure Gauge	PGPL150	Snap-On
1	3-19/32" Single Bevel Putty Knife	PK53A	Snap-On
1	3 pc. Pliers Set	PL307ACF	Snap-On
1	US/Metric Dial Type Caliper	PMF147A	Snap-On
1	8" Bronze Drift Punch	PPB826A	Snap-On
1	20" Oval Bearing Race Punch	PPC20LB	Snap-On
1	11 pc. Punch & Chisel Set	PPC710BK	Snap-On
1	Telescoping Magnet Pick Up Tool	PT5C	Snap-On
1	Round Pocket Mirror	PTM143	Snap-On
1	Wire Striper/Cutter/Crimper/Bolt Cutter	PWC9	Snap-On
1	3/8" Dr. SAE Adj. Click-Type Flex-Head Torque Wrench	QD2FR75B	Snap-On
1	1/2" Dr. SAE Adj. Click-Type Flex-Head Torque Wrench	QD3FR250A	Snap-On
1	3/8" Dr. 6 pt. SAE 3/16" Dr. Shallow Spark Plug Socket	S9704KA	Snap-On
1	3/8" Dr. 6 pt. SAE 5/16" Dr. Shallow Spark Plug Socket	S9706KA	Snap-On
1	Flat Tip Pocket Screwdriver W/Magnet	SDD224O	Snap-On
1	Instinct AWL	SG7ASABR	Snap-On
1	4 pc. Soft Grip Mini Pick Set	SGASA204CR	Snap-On
1	8 pc. Combination Screwdriver Set	SGDX80BR	Snap-On
1	2 pc. Striking Prybar Set	SPBS704AO	Snap-On
1	8-7/8" Long Snap Ring Pliers	SRP2B	Snap-On
1	14" Long Snap Ring Pliers	SRP4	Snap-On
1	Convertible Retaining Ring Pliers	SRPC7000	Snap-On
1	1/2" Dr. 12 pt. 10mm Shallow Socket	SWM101A	Snap-On
1	1/2" Dr. 12 pt. 11mm Shallow Socket	SWM111A	Snap-On
1	1/2" Dr. 12 pt. 25mm Shallow Socket	SWM251	Snap-On
1	1/2" Dr. 12 pt. 26mm Shallow Socket	SWM261	Snap-On
1	1/2" Dr. 12 pt. 27mm Shallow Socket	SWM271	Snap-On
1	Torqometer	TE25A	Snap-On
1	Deutsch Terminal Removal Tool Kit	THX483	Snap-On
1	Socket, Shallow 1-1/4" 12- pt.	TW401	Snap-On
1	Brush, Wire, Brass, Miniature, 2"	WBBS2	Snap-On
1	Oil Filter Slip Joint Pliers	YA4274A	Snap-On
1	Oil Filter Pliers	YA4275	Snap-On
1	Welding Gloves	YA427B	Snap-On
1	Welding Sleeve	YA4280	Snap-On
1	Fluke Multimeter 87-V	2074974(F)	Fluke
1	US/Metric Measuring Tape	33-215	Stanley
1	Cut 1 Dipped Gloves SML-2XL (Sized)	48-22-8903	Milwaukee
1	Lifting Brackets	7100U1	Custom
1	.300-.400" Hole Gauge	CEN-4313	Central Tools
1	4' Endless Sling	EN1-801TX4	Tuff-Edge
1	Box of 100 Nitrile Gloves (Sized)	63-332	Ambi-Dex
1	Quiet Bands Hearing Protection	QB2HYG	Supra-Aural
1	Mini LED 2-cell AAA Flashlight	SP32116	Maglite
1	Welding Pliers	770150	Hobart
1	Soapstone Holder/Marker	326-SP-800-1	Wypo
1	Auto Darkening Welding Helmet	S26100	Sellstrom
1	Super Scraper	SS-4U	Inn. Tools

2ND YEAR OPTIONAL

QTY	DESCRIPTION	CATALOG #	VENDOR
	SNAP-ON TOOLS		
1	3/8" Dr. X-long Handle Flex-Head Ratchet	FHLLX80	Snap-On
1	6 pc. 12 pt. SAE Midget Wrench Combo Set	OXI706B	Snap-On
1	10 pc. 12 pt. Metric Midget Wrench Combo Set	OXIM710B	Snap-On
1	9-1/4" Hose Clamp Pliers	PHP1A	Snap-On
1	14" Hose Clamp Pliers	PHP2A	Snap-On
1	Cooling System Vacuum/Filler	RADKITPLUSA	Snap-On
1	1/2" Dr. Long Handle Ratchet	SF80A	Snap-On
	MILWAUKEE DRILL/DRIVE IMPACT SET		
1	M18 Fuel 1/2" Brushless Compact Drill/Driver Kit	2903-22	Milwaukee
1	M18 Fuel 3/8" Impact Wrench - Bare Tool	2854-20	Milwaukee
1	M18 Fuel 1/2" High Torq. Impact Wrench - Bare Tool	2967-20	Milwaukee

A partial kit may be itemized as a special order. Special orders are subject to availability, vendor discretion, and may not receive the standard educational pricing. To request a special order quote, contact the NDSCS Bookstore Tool Department. Vendors reserve the right to substitute items due to changes in supply chain with items deemed of equal or greater quality. Prices are subject to change without notice due to unforeseen vendor cost increases.

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3/24