



Division of Business and Career Education Advisory Meeting Automotive Technology

October 20, 20201
10:00 pm – 12:00 pm
[Zoom](#)

Minutes

The purpose of the advisory committee is to provide input and make recommendations to the faculty and administration on changes in direction for the career education programs. These recommendations include suggestions for improvement, expansion, student recruitment, innovation, and/or equipment commonly found in industry that is associated with the pertinent career program.

10:00 CALL TO ORDER

Business/Industry/Community Members Present:

Tom Brenneman ASE Education Foundation
John Crofford Connell Chevrolet, Service Manager
Paul Gammerino Mustangs & Fast Fords OC, Owner
Dr. Krista Ganga, Coastline ROP
Ron Kato, ASE Education Foundation
Mitch May, Subaru
Kim McPhaul, OCADA, Member Services Manager
Lynn (Quint) Meyers Snap-On Tools, Account Manager
Kevin Rans, Westminster High School, Automotive Instructor
Cynthia Varnell- Gustafson Brothers Automotive and the Gustafson Education Foundation

GWC Faculty/Staff/Guests/District Members Present:

Max Brinkman-Marheine GWC, Instructor, Auto Technology
Dorsie Brooks GWC, Grants Coordinator
Jaime Gonzalez GWC, Advanced Transportation & Logistics, Regional Director
James Hulbert GWC, Instructional Associate, Auto Technology
John Kasabian GWC, Dept. Chair/Instructor, Auto Technology
Jimmy Nguyen GWC, Counselor
Diana Roachat GWC, Outreach
Mike Russell GWC, Instructor, Auto Technology
Jeanine Sagusay GWC, Counselor
Chris Whiteside GWC, Executive Dean, Business & Career Education

Welcome and Introductions

- Kim McPhaul from OCADA is facilitating.
- Round Table of introductions.

10:05 PROGRAM UPDATE

- COVID-19 impact
 - March 2020- Fully online instruction- Major drop in students because they were able to EW
 - Now Lecture online, with labs in person. Hybrid option. Have seen a drop but starting to come back. Down about 200 students but expecting it to come back.
 - COVID has given the college a chance to try out hybrid models. Were thinking about it before, and this tried to try us.
 - Spring 2022- Students will be required to be vaccinated or tested weekly.
- Labor Market Data
 - Service demand is going up because

10:10 CURRICULUM UPDATE

- Why are we looking at changing the curriculum
 - Create Certificates that align with ASE Tests
 - Create Completions for the students and the college

- Allow specializations in particular service areas
- Smaller Certificates that lead to bigger certificates
- Students are taking these class patterns anyway, now they will have a completion

Certificates



STACKED OPTIONS & AWARDS								
CERTIFICATES								
OPTION	AWARD	ADDITIONAL COURSES						
5	MAINTENANCE SPECIALIST	N/A						
6	CHASSIS SPECIALIST	AUTO 0340	MS CERTIFICATE					
7	ENGINE SPECIALIST	AUTO 0330	MS CERTIFICATE	CS CERTIFICATE				
8	TRANSMISSION SPECIALIST	AUTO G350 AUTO G351	MS CERTIFICATE	CS CERTIFICATE	ENGINE CERTIFICATE			
9	POWERTRAIN SPECIALIST	AUTO 0350 AUTO G351	MS CERTIFICATE	CS CERTIFICATE	ENGINE CERTIFICATE			
10	ELECTRICAL SPECIALIST	AUTO 0320 AUTO 0321	MS CERTIFICATE	CS CERTIFICATE	ES CERTIFICATE	PS CERTIFICATE		
11	HVAC SPECIALIST	AUTO G360	MS CERTIFICATE	CS CERTIFICATE	ES CERTIFICATE	PS CERTIFICATE	ELS CERTIFICATE	
12	ENGINE PERFORMANCE SPECIALIST	AUTO 0330 AUTO G331	MS CERTIFICATE	CS CERTIFICATE	ES CERTIFICATE	TS CERTIFICATE	PS CERTIFICATE	ELS CERTIFICATE
			HVACS CERTIFICATE					
13	COMPREHENSIVE TECHNICIAN SPECIALIST	N/A	MS CERTIFICATE	CS CERTIFICATE	ES CERTIFICATE	TS CERTIFICATE	PS CERTIFICATE	ELS CERTIFICATE
			HVACS CERTIFICATE	EPS CERTIFICATE				

CERTIFICATES						
14	SMOG TECHNICIAN SPECIALIST	AUTO G181	ST CERTIFICATE	ES CERTIFICATE	EP CERTIFICATE	
15	HYBRID ELECTRIC VEHICLE MAINTENANCE	N/A	MS CERTIFICATE	ES CERTIFICATE		
16	HYBRID ELECTRIC VEHICLE DIAGNOSTIC	N/A	HEVM CERTIFICATE	ES CERTIFICATE		

Associates Degrees



STACKED OPTIONS & AWARDS						
A.S. DEGREES						
OPTION	AWARD	ADDITIONAL COURSES				
1	POWERTRAIN	N/A	PS CERTIFICATE	ES CERTIFICATE	TS CERTIFICATE	
2	ENGINE PERFORMANCE	N/A	EP CERTIFICATE	ES CERTIFICATE	ELS CERTIFICATE	
3	HYBRID ELECTRIC VEHICLE DIAGNOSTIC TECHNICIAN	N/A	HEVDS CERTIFICATE	HEVMS CERTIFICATE	MS CERTIFICATE	ES CERTIFICATE
4	SMOG TECHNICIAN	N/A	ST CERTIFICATE			
		AUTO G181	ST CERTIFICATE	ES CERTIFICATE	EP CERTIFICATE	



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AUTOMOTIVE TECHNOLOGY PROGRAM CURRICULUM PROPOSAL													
COURSE ID	COURSE TITLE	CONTACT HOURS				AWARDS							
		UNITS	LEC	LAB	LHE	DEGREE				CERTIFICATE OF ACHIEVEMENT			
						AA Powertrain Specialist	AA Engine Performance and Emissions Specialist	AA Smog Technician	AA Hybrid Electric Vehicle Diagnostic Technician	CTS Comprehensive Technician	STS Smog Technician Specialist	HEVMS Hybrid Electric Vehicle Maintenance Specialist	HEVD Hybrid Electric Vehicle Diagnostic Specialist
G101	Intro to Automotive Technology	3	54	18	3.9								
G181/G180	Honda Express Service/General Express Service	4	54	54	5.7	✓	✓		✓	✓		✓	✓
G110	Engine Repair	5	72	54	6.7	✓	✓			✓			
G120	Basic Electrical/Electronic Systems: Introductory	5	72	54	6.7	✓	✓	✓	✓	✓	✓	✓	✓
G121	Basic Electrical/Electronic Systems: Advanced	5	72	54	6.7	✓	✓	✓	✓	✓	✓	✓	✓
G130	Engine Performance: Basic	4.5	63	54	6.2		✓	✓		✓	✓		
G131	Engine Performance: Advanced	4.5	63	54	6.2		✓	✓		✓	✓		
G140	Automotive Chassis: Brakes	5	72	54	6.7				✓	✓	✓	✓	✓
G141	Automotive Chassis: Steering and Suspension	4.5	66	50	6.556					✓			
G145	Basic Clean Air Car Course	5	72	54	6.7			✓			✓		
G150	Manual Drive Trains and Axles	4	54	54	5.7	✓				✓			
G151	Automatic Transmission and Transaxles	4	55	70	6.556	✓				✓			
G160	Heating and Air Conditioning	4	60	40	5.333					✓			
G170	Hybrid Vehicles	3	54	18	3.9	✓			✓			✓	✓
G171	Hybrid Vehicles: Advanced	3	54	18	3.9				✓				✓
G173	Electric Vehicles	5	72	54	6.7				✓				✓
G175	Automotive Diesel	5	72	54	6.7								
G181	Honda PACT 1	4	54	54	5.7								
TOTAL AUTOMOTIVE UNITS						30	28	24	30	49.5	24	17	30

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G160	Heating and Air Conditioning	4	60	40	5.333							✓	
G170	Hybrid Vehicles	3	54	18	3.9								
G171	Hybrid Vehicles: Advanced	3	54	18	3.9								
G173	Electric Vehicles	5	72	54	6.7								
G175	Automotive Diesel	5	72	54	6.7								
TOTAL AUTOMOTIVE UNITS						14	14	18.5	17	22	14	18	28

Comments on Curriculum:

- Glad to see the AS Degrees
- OCADA is tracking over 30 new EVs coming out over all brands

Vote was taken and these changes are approved by the committee.

10:45 CURRENT INDUSTRY TRENDS

- What are the skills that your employees need training on?
Varnell: we are finding that the entry level techs don't always like to take advice/ instruction



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and they don't like to ask for help. Making sure that they can ask for help when needed.

McPhaul: Communication skills is lacking in some students

Kasabian: What is the culture in the shop regarding experienced technicians and newer

Varnell: We have a paired mentor mentality in their shop. It could be a problem in other shops.

Russell: I see this issue in the classroom as well. I try to have them check in when doing lots of steps. Making sure that they are checking in at certain points. Make them start over if they don't check in. OK to mess up here on Campus, not in a shop.

Varnell: video's on what to expect on what to expect from a shop?

○

- What are the current tools/equipment that are needed to teach the skills in the classroom/shop?
 - Scan tools, Bosch, Snap on, etc?
- Are there any areas of specialization that could be addressed by the college?
 - Gonzalez- Lots of conversation about Fuel Cell vs Electric/Hybrid. College programs continue to try to touch on all types of Alt fuels since the field is still really trying to decide. So students need to really have some knowledge of all of it.
 - Kasabian- Any word on ICE fuel that is neutral emissions.
 - Gonzalez- CNG – near zero emission, infrastructure is still there.
 - Kasabian- Because it's still a fossil fuel
 - Gonzalez- really cool CNG stuff going on. Should cover a bit of all of them?
- How soon are mechanics are moving into Hybrid and EVs?
 - Seeing mostly advanced technicians on hybrids and EVs?
- Other questions:
 - Really encourage students to take the specialized manufacturing training?
 - May- Subaru- all the faculty have access to the Subaru training and they have an EV coming out soon.
 - McPhaul- Is there training that industry could provide
 - Tesla or Nissan training on advanced vehicles
 - Kasabian- As a teacher, was trying to figure out a way to RC Electric Cars, do you think that is something that the students could use?
 - Gonzalez- Some educational companies that have Fuel Cell and EVs, might be a great idea for removing the intimidation factor.
 - Could create a small unit class on the Alt Fuel/
 - Use that Switch vehicle getting a DC version, getting away from the DC current.
 - Brooks- I think a visit to shops would be something that we could look at?
 - Gammerino- support the idea of this to really give the student some idea of what the different levels of activity. Could help them make career decisions.
 - Kasabian- kind of a reality check for what a shop really looks like. Many have no real idea. They are really afraid
 - McPhaul- really humanize that there are customers who rely on their cars.
 - Rans- As an instructor (K12) knowing where we are going, relegated to things on the internet. The kids are also behind the times. As a HS instructor, it would be really cool to take students
 - Russell- spectrum of shops to see some ideas.
 - Kasabian- What about bringing students to the training centers?
 - May- Typically, Mondays are a set up days but could also see some retail visits.
 - Gonzalez- been having some discussions about externship programs for faculty.



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- Looking for opportunities for faculty to go out and
 - Breneman- ASE has updated every 10 hours counts towards 1 hour. Can take counts towards half of your continuing education hours.
 - Russell- Prior to Covid, we had lots of competitions, and bringing HS students back on to campus.
 - Rans- Yes, need to get these students back to reality.
 - Brooks- Getting Pathway Days back on campus in Spring 2022
 - Russell- Really enjoy the OCADA Competition. Love to see the students in the HS competition then come and join our program the following year.
 - Russell- Now students are giving scholarships to students
 - McPhaul- giving 30 HS scholarships each year. - Hoping to get it up and going in the Spring in Person
 - Rans- Any insight on when new cars are going to be back on the market? Supply chain issues/
 - McPhaul- probably middle of next year. Service side of dealerships is super busy because people can't get new cars.
 - Varnell- Seeing a high level of work as well. Everyone forgot how to drive.
 - Crofford- Huge uptick in traffic
 - Talking about bringing people to the shop- 8 weeks in lab and 8 weeks in dealership working. Get to know the students, but also get the
 - Gonzalez- One of the better models, Cerritos college, has this pathway. Specific to manufacturing brands. Agreements with the dealerships. Once it is established, they are earning while learning.
 - McPhaul, Ford, GM, and ITTP
 - Cofford- We hire everyone that Cerittos and GWC, more meet the technicians
 - May- Portland, OR, needs a sponsor One dealership will sponsor two students to alternate the two years.
 - <https://catalog.mhcc.edu/programs-majors/automotive-technology-subaru-u-degree/>
 - Rans- Cerritos has a summer class that students take to feed them into the manufacturers program.
 - Russell- We have a Noncredit pathway for this. Noncredit is free- had conversations with the National Urban League and WDBs. Good pathway builder.
 - Rans- Why noncredit?
 - Free to students, to try to get the students into a new career.
 - The General Express?
 - Gonzalez- Have you looked into the TIA training-
 - Russell- super rigorous, might be too much for those classes. Incorporate into the curriculum, but not the whole thing.
 - Kasabian- Binder is amazing super great resource
 - Russell- Noncredit- Now have a Smog Certification program- also terminal program for smog certification and an update class that we are working on and developing/
 - Brinkman-Marheine- we are working on a noncredit (fee) update course. 16 hours
- Equipment
 - Might want to consider the one with the lathe truck
 - McPhaul: request the list to be sent out.
 - Breneman- Cutaways are great, especially ones that relate to an actual vehicle, but they become obsolete
 - Russell- Looking at a partnership with Hunter as a training center. Would a training center here be beneficial to the your technicians.



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- Brenneman- Are you getting good service from Hunter?
 - Crofford- Good rep from Hunter
- McPaul- would it be beneficial to the campus?
 - Kasabian- exposure of the college to manufacture. It's excellent exposure for the college, but also they will be renting space. Helps the program pay for equipment.
- Advisory
 - Regional Advisory in the Spring, with each college doing one in the Fall.
 - Breneman- Will need to have a request to ACE.
 - Cynthia offered to host for the next meeting.

11:45 RECOMMENDATIONS and ACTION ITEMS / COMMITTEE APPROVAL

The committee recommends the following curriculum for approval:

Certificates and Degrees as presented:

Automotive Technician Certificate
Chassis Specialist Certificate
Electrical Specialist Certificate
Engine Performance Associate of Science
Engine Performance & Emissions Specialist Certificate
Engine Specialist Certificate
HVAC Specialist Certificate
Hybrid Electric Vehicle Diagnostic Technician Associate of Science
Hybrid Electric Vehicle Maintenance Specialist Certificate
Hybrid Electric Vehicle Maintenance Technician Certificate
Maintenance Specialist Certificate
Powertrain Specialist Associate of Science
Powertrain Specialist Certificate
Transmission Specialist Certificate
Smog Technician Associate of Science
Smog Technician Certificate

Equipment List

See Attachment B

The Committee approves the list provided as appropriate and necessary for the program.

Expanding Partnerships

The Committee supports the idea of exploring a partnership with Hunter to create a training center on GWC campus.

11:47 ADJOURNMENT

Appendix A.- PPT Slides

Appendix B- Chat Text with approvals



Advisory Meeting

Automotive Technology

Golden West College

October 20, 2021

STUDENT SERVICES CENTER

Agenda



10:00– 12:00pm

- 1. Welcome and Introductions**
- 2. Program Update**
 - 1. COVID Update and Impact**
 - 2. Labor Market Update**
- 3. Curriculum Update**
- 4. Current Industry Trends**

Labor Market Data



Exhibit 4. Orange County

Occupation (SOC)	2020 Jobs	2025 Jobs	5-Yr Change	5-Yr % Change	Annual Openings	Entry-Level Hourly Earnings (25 th Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75 th Percentile)
Automotive Service Technicians and Mechanics (49-3023)	6,000	5,831	(168)	(3%)	515	\$17.04	\$23.94	\$31.94

Current Living Wage (one adult) in OC is: \$20.63

New Stackable Curriculum Proposal



- Create Certificates that align with ASE tests
- Create "completions" for students and college
- Allow specialization in particular service areas

Certificates



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OPTION	AWARD	ADDITIONAL COURSES						
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7	ENGINE SPECIALIST	AUTO G110	MS CERTIFICATE	CS CERTIFICATE				
8	TRANSMISSION SPECIALIST	AUTO G150	MS CERTIFICATE	CS CERTIFICATE	ENGINE CERTIFICATE			
		AUTO G151						
9	POWERTRAIN SPECIALIST	AUTO G150	MS CERTIFICATE	CS CERTIFICATE	ENGINE CERTIFICATE			
		AUTO G151						
10	ELECTRICAL SPECIALIST	AUTO G120	MS CERTIFICATE	CS CERTIFICATE	ES CERTIFICATE	PS CERTIFICATE		
		AUTO G121						
11	HVAC SPECIALIST	AUTO G160	MS CERTIFICATE	CS CERTIFICATE	ES CERTIFICATE	PS CERTIFICATE	ELS CERTIFICATE	
12	ENGINE PERFORMANCE SPECIALIST	AUTO G130	MS CERTIFICATE	CS CERTIFICATE	ES CERTIFICATE	TS CERTIFICATE	PS CERTIFICATE	ELS CERTIFICATE
		AUTO G131						
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Associates Degrees



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Associate Degrees



Associate Degrees are the Certificate coursework, plus the General Education Requirements.

Rio Hondo College has a new Bachelor's Degree in Auto Tech.

Current Industry Trends



- What are the skills that your employees need training on?
- What are the current tools/equipment that are needed to teach the skills in the classroom/shop?
- Are there any areas of specialization that could be addressed by the college?
- Are you seeing more hybrid and electric vehicles in your shops?

Equipment Wish List



00:19:38 Mike Russell: Mike Russell, Golden West College
00:19:40 OCADA: Kim McPhaul, Orange County Automobile Dealers Association
00:19:41 Quint Myers: Quint Myers - Snap-on
00:19:48 Jeannine Sagusay: Jeannine Sagusay- GWC Counselor
00:19:52 Paul: Paul Gammerino Mustangs & Fast Fords OC
00:19:57 Jaime Gonzalez: Jaime Gonzalez, Regional Director, Advanced Transportation & Logistics, GWC
00:20:04 Kevin Rans: Kevin Rans, Westminster High School, HBUHSD
00:20:04 Cynthia Varnell: Cynthia Varnell - Gustafson Brothers Automotive and the Gustafson Education Foundation
00:20:48 Diana Rochat: Diana Rochat - GWC CTE Outreach
00:21:02 John Kasabian: John Kasabian GWC Faculty
00:21:26 Jimmy Nguyen: Jimmy Nguyen, GWC Counselor
00:21:33 James Hulbert (He/Him/His): James Hulbert GWC Lab Coordinator
00:21:41 James Hulbert (He/Him/His): Good Morning everyone!
00:26:59 Cynthia Varnell: are students required to be vaccinated?
00:27:28 James Hulbert (He/Him/His): Not at this time but there is a mandate in the offing
00:27:57 Dorsie Brooks (she/her): Spring Semester 2022 students will be required to be vaccinated or test weekly.
00:35:18 Cynthia Varnell: Our demand is higher. Industry seems to be lacking mid-level B techs.
00:36:16 Christopher Whiteside: The living wage data is also tied to the recent census.
00:43:06 Tom Brenneman: Sorry for joining late. I just left another advisory meeting.
00:45:10 Dorsie Brooks (she/her): No problem! Thanks for being here, Tom!
00:46:28 Dorsie Brooks (she/her): If anyone joined later, please put your name and organization here in the chat for our records. Thank you!
00:46:56 Dr. Krista Ganga, Coastline ROP: Krista Schweers-Ganga, Coastline ROP
00:47:17 Ron Kato: Sure, Ron Kato with ASE
00:48:54 Tom Brenneman: Tom Brenneman - ASE
00:49:21 John Kasabian: They are also included in the HEV Associate's of Science
00:52:05 Kevin Rans: Aye
00:52:07 OCADA: Approved!
00:52:18 Mitch May: aye
00:52:22 Quint Myers: Approved
00:52:23 Cynthia Varnell: Yes
00:52:24 Paul: Agreed, Approved
00:52:26 Jaime Gonzalez: aye
00:52:39 Tom Brenneman: approved
00:52:51 Ron Kato: Thumbs up
00:54:03 Cynthia Varnell: we are finding that the entry level techs don't always like to take advice/instruction and they don't like to ask for help
00:54:21 Cynthia Varnell: It may be generational?
01:13:05 Jimmy Nguyen - Counselor: We have field trips for Geology so I think it's possible with covid guidelines in place.
01:16:28 Meridith Randall: I totally agree that it would be beneficial for students, so we can figure out the details, etc.
01:31:22 James Hulbert (He/Him/His): <https://catalog.mhcc.edu/programs-majors/automotive-technology-subaru-degree/>
01:36:13 Mitch May: Mt Hood Community College Contact Information
01:36:22 Mitch May: Mt. Hood CC 26000 SE Stark St. IT 28 Gresham OR Steve Michener
steve.michener@mhcc.edu 801-791-3763
01:36:47 Mitch May: I have to jump on another call, thank you
01:43:01 Dorsie Brooks (she/her): Thank you Mitch!
01:43:44 Dorsie Brooks (she/her): Is there any new tools being used in shops that we should look into?
01:50:56 Cynthia Varnell: agreed
01:50:59 Jaime Gonzalez: List of equipment and tools approved

01:51:03 Quint Myers: Agreed
01:51:05 Kevin Rans: Aye to tools and equipment!
01:51:19 Tom Brenneman: Agree on tools and equipment
01:52:59 Paul: Agreed Tools and Equipment

01:53:02 Cynthia Varnell: I think itâ€™s a great idea especially in our area
01:53:31 Jaime Gonzalez: Paul agreed to tools and equipment list (he accidently sent me DM)
01:53:38 Cynthia Varnell: we seem to get good service from Hunter. they even come to our shop to train
01:55:40 Dorsie Brooks (she/her): Its all tax money. So it's all of our pockets.
01:56:34 Tom Brenneman: Support Hunter
01:56:43 Cynthia Varnell: I support Hunter partnership
01:56:46 Paul: Hunter partnership sounds great
01:56:50 Jaime Gonzalez: yes on Hunter
01:57:02 Kevin Rans: Aye to moving forward with industry partnerships.
01:58:03 Cynthia Varnell: We could host here if being on campus is difficult due to restrictions
02:02:44 Cynthia Varnell: or for the career fair
02:03:26 Dorsie Brooks (she/her): Thank you all!
02:03:27 Mike Russell: Thank you Kim!
02:03:30 Marilyn Cunneen: Thank you!

Tool Name/Description	Requested By	Requested Date	Required Date
Metric Bubble Flaring Set	Max Brinkman-Marheine	11/1/2019	
Tube Cutting and Double Flaring Set	Max Brinkman-Marheine	11/1/2019	
Universal Hydraulic Flaring Tool Set	Max Brinkman-Marheine	11/1/2019	
Tubing Bender	Max Brinkman-Marheine	11/1/2019	
11pc. Metric 15* Offset Low Torque Slimline Open End Wrench Set	Max Brinkman-Marheine	11/1/2019	
EZ Drum Reach Electronic Brake Drum Gauge	James Hulbert	11/1/2019	
Honda 07 Ball-joint separators	John Kasabian	2/23/2018	
Tie Rod Separators Honda 07	John Kasabian	2/23/2018	
RX Light Kit for K Model Racks	John Kasabian	12/5/2019	
Pico Scopes Diveability 4425	Max Brinkman-Marheine	2/23/2018	
WPS500 Dual Pressure Transducer Kit w foam box trays	Max Brinkman-Marheine	2/23/2018	
Vacutec Universal Fuel Cap Adapter	Max Brinkman-Marheine	2/23/2018	
Engine Performance trainer	Max Brinkman-Marheine	2/28/2018	
Ford Focus GDI trainer	Max Brinkman-Marheine	2/28/2018	
fuel pressure Kits	Max Brinkman-Marheine	2/28/2018	
Jump-N-Carry JNC950 2000 Peak Amp 12V Jump	James Hulbert	11/4/2019	
Manual Brake Bleeder Kit	James Hulbert	11/1/2019	1/31/2020
Vacuum Brake Bleeder	James Hulbert	11/1/2019	1/31/2022
Brake Caliper Press (Blue Point) fancy	James Hulbert	11/1/2019	
Snap on Torque certification	Mike Russell	2/23/2018	
Mastercool Compressor Service Tools	John Kasabian	2/23/2018	
AMCO Brake Lathe Adapter Sets	John Kasabian	2/23/2018	
10 Vent temp gauges with blue performance zone Robinair	John Kasabian	2/23/2018	
LH41 AC/DC Low Current Clamp AMPROBE	John Kasabian	2/23/2018	
Nitrogen Tank/Inflation System	Max Brinkman-Marheine	2/23/2018	
10 Vent temp gauges with blue performance zone Robinair	John Kasabian	2/23/2018	
Replacement Pad for VACTEST-01K	Mike Russell	2/28/2018	
Replacement Seal for VACTEST-01K	Mike Russell	2/28/2018	
Solenoid Test Manifold Kit	Mike Russell	2/28/2018	
Planetary gear set trainer	Wayne Olson	2/28/2018	
Cutaway open rear differential	Wayne Olson	2/28/2018	
Diagnostic Thermal Imager	John Kasabian	2/14/2019	
Tech Wrench 3/8"	James Hulbert	11/4/2019	

Tech Wrench 1/2"	James Hulbert	11/4/2019	
Honda Monguse	Max Brinkman-Marheine	11/19/2019	
Pico Scope NVH Kit Advanced	Max Brinkman-Marheine	2/23/2018	
Vacuum Test Kit	Mike Russell	2/28/2018	
4I60 test Plate	Mike Russell	2/28/2018	
ZF test plate	Mike Russell	2/28/2018	
Ford Test Plate	Mike Russell	2/28/2018	
Clutch spring compressor	Mike Russell	2/28/2018	
Driveshaft working angle trainer	Wayne Olson	2/28/2018	
Verus Diagnostic System	James Hulbert	11/1/2019	
Brake Caliper Press (Blue Point)	James Hulbert	11/1/2019	
18 pc Brake Caliper Wind Back Tool Set	James Hulbert	11/1/2019	
Exhaust Pressure Tester (First Look Engine Diagnostic Sensor)	Max Brinkman-Marheine	2/23/2018	
uTest Advanced Terminal Test Kit	Max Brinkman-Marheine	2/23/2018	
Distributor ignition system trainer - Ford Tempo 2.3L	Wayne Olson	2/28/2018	
Cutaway battery	Wayne Olson	2/28/2018	
3-Pin Brake Piston Tool	James Hulbert	11/1/2019	
Shockwave Express Lift to replace in-ground unit in D115 Need to account for ins	John Kasabian	2/23/2018	
SPC Tool Master Ball Joint Seperator Set	Max Brinkman-Marheine	2/23/2018	
Coats Tire Machine	John Kasabian	2/23/2018	
Brake Depressors	John Kasabian	2/23/2018	
Heavy Duty Roll Cart	James Hulbert	2/23/2018	
Suspension & steering system trainer	Wayne Olson	2/28/2018	
Four wheel hydraulic brake trainer with disc and drum - GM	Wayne Olson	2/28/2018	
Ohm's law and DC circuits trainer	Wayne Olson	2/28/2018	
Starting system trainer	Wayne Olson	2/28/2018	
Transmission Teardown Table	Mike Russell	2/28/2018	
Coil-on-plug ignition system trainer - Honda Civic 1.7L	Wayne Olson	2/28/2018	
Alternator trainer - externally reglated	Wayne Olson	2/28/2018	
Pallet Racks	James Hulbert	2/28/2018	
Tabletop stand for EM-200 series trainers	Wayne Olson	2/28/2018	
DST-I Multiple Vehicle Communication Interface	John Kasabian	2/23/2018	
Electrical Cord Reels	John Kasabian	2/23/2018	
Hunter Hawkeye Barcode Scanner	John Kasabian	2/23/2018	

Purchase Date	Manufacturer/Vendor	Part Number	Quantity	List Price	Subtotal	Priority
	Snap On	TFM428	4	123.00	492.00	1
	Snap On	TF528D	4	135.75	543.00	1
	Snap On	TF700	4	351.23	1,404.92	1
	Snap On	TBS300	4	59.25	237.00	1
	Snap On	LTAM811	2	416.25	832.50	1
	Snap On	FFL74150050	2	307.80	615.60	1
	BernardiParts.com (Honda)	07AAC-SJCA120	6	237.85	1,427.10	1
	Hondapartsnow.com	07MAC-SL00200	6	218.95	1,313.70	1
	Snap On	HUN2034381	1	978.11	978.11	1
	AESWave	Picoquad4425	4	3,511.00	14,044.00	1
	Auto Nerds	WPS500	2	1,900.00	3,800.00	1
	Amazon	VCTVWA-093	1	44.08	44.08	1
	Atech	2652	1	6,500.00	6,500.00	1
	ConsuLab	EM-140c_GDI	1	24,000.00	24,000.00	1
	Snap On	EEFI500A	3	584.99	1,754.97	1
	Amazon	JNC950	2	281.14	562.28	1
	Snap On	PVB70858	6	57.87	347.22	2
	Snap On	BB9008	6	73.05	438.30	2
	Snap On	BTCP1	2	112.50	225.00	2
	Snap-On	n/a	1	16,585.00	16,585.00	2
	teqequipment.net	91333	2	556.00	1,112.00	2
	Amazon	??	2	1,784.80	3,569.60	2
	alltiresupply	10945	10	8.58	85.80	2
	Honda Special Tool Program	FLULH41A	2	419.00	838.00	2
	prestacycle	n/a	1	536.90	536.90	2
	alltiresupply	n/a	10	8.58	85.80	2
	Sonnax/Transtar	VACTEST-PAD	4	16.33	65.32	2
	Sonnax/Transtar	VACTEST-06	10	14.13	141.30	2
	Sonnax/Transtar	95430-VTK	4	147.02	588.08	2
	ConsuLab	52340 EM-1100 Planetar	1	910.18	910.18	2
	ConsuLab	52684 EC-430 open diff	1	1,700.18	1,700.18	2
	SnapOn	EETH310	2	1,421.25	2,842.50	2
	Snap On	ATECH2FR100B	2	393.75	787.50	2

Total:

	Snap On	ATECH3FR300B	2	461.25	922.50	2
			5			3
	AESWave	pt-PQ120	1	2,099.00	2,099.00	3
	Sonnax	VACTEST-01k	4	295.35	1,181.40	3
	Sonnax/Transtar	777754-VTP	4	271.28	1,085.12	3
	Sonnax/Transtar	95740-VTP1	1	438.52	438.52	3
	Sonnax/Transtar	56947J-VTP	1	266.20	266.20	3
	Atec Trans tools	T-0158-SPA	5	78.00	390.00	3
	ConsuLab	53054 EM-200-28	1	3,450.18	3,450.18	3
	Snap On	EEMS330W	6	9,749.00	58,494.00	4
	Snap On	BTCP500	4	56.44	225.76	4
	Snap On	APT78618	2	53.96	107.92	4
	Auto Nerds/AESWave	sx-100	5	385.00	1,925.00	4
	AESWave	16-200	2	199.00	398.00	4
	ConsuLab	52612 EM-200-12 d.i.s.	1	2,250.18	2,250.18	4
	ConsuLab	52945 EC-520 battery	1	340.18	340.18	4
	Snap On	BTPUCK3	1	38.25	38.25	5
	Honda Special Tool Program	n/a	1	11,000.00	11,000.00	5
	amazon	37995	1	189.96	189.96	5
	Bestbuyautomotive	Rim Clamp RC-55	1	5,341.00	5,341.00	6
	Honda Special Tool Program	96000	6	45.00	270.00	6
	Honda Special Tool Program	KRP1HD	15	306.00	4,590.00	6
	ConsuLab	52793 EM-130	1	11,200.18	11,200.18	6
	ConsuLab	52746-1GM EM-123-4 GM	1	6,625.18	6,625.18	6
	ConsuLab	53044 CL-1919-05	1	2,090.18	2,090.18	6
	ConsuLab	52932 EM-200-19	1	1,750.18	1,750.18	6
	Atec Trans tools	t-0177-W6	12	785.00	9,420.00	7
	ConsuLab	52789 EM-200-14 ign. Ho	1	3,125.18	3,125.18	7
	ConsuLab	52778 EM-500-01 alterna	1	6,225.18	6,225.18	7
	Uline	H-5715	10	299.00	2,990.00	7
	ConsuLab	52609 EM-200-09 Stand	1	140.18	140.18	8
	Honda Special Tool Program	DSCWIFIAF	4	1,428.00	5,712.00	10
	McMaster Carr	7353K211	10	746.83	7,468.30	10
	TBD	TBD			0.00	10

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					0.00
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Total: 455,503.71

\$455,503.71