



Owning, Insuring, and Maintaining a Vehicle

What goes into owning and maintaining a motor vehicle?

Buying a Vehicle

Considerations when purchasing a vehicle:

- Purchase price
- Depreciation
- Financing
- New/Used
- Purchase or lease
- Vehicle size
- Engine size and types
- Transmission (manual/automatic)
- Optional equipment



Leasing Vehicle Considerations

- Responsible for monthly payments and maintenance.
- New vehicle.
- You have a lease contract which expires.
- At the end of the lease, you can return the vehicle and lease another, purchase the vehicle at a cost determined at the start of your lease, or return the vehicle with no obligation.
- Leasing limits how many miles you can put on a vehicle. Extra miles cost you an additional charge.



New vs. Used Vehicle

- What factors should you consider when buying a new or used vehicle?
- New versus used vehicle “calculator” resources available online.



Owning and Maintaining a Vehicle Learning Activity

1. With a partner, research a vehicle you would like to buy.
2. Next, use an auto loan calculator to determine your monthly payments at 4% interest (approximate).
3. Keep these calculations handy...

Purchasing a Used Vehicle

- Consider how much you can pay.
- Research value of vehicle.
- Besides looking good, make sure the vehicle is in good working mechanical condition.
- Determine whether it was involved in a collision or needs repairs.
- If possible, talk to the previous owner about the condition and maintenance done on the vehicle.

What to Check

- Check the doors and locks.
- Vehicle appearance.
- Fluid leaks.
- Evidence of collision damage.
- Sit in the vehicle and check seats for comfort and condition.
- Make sure lights and accessories work.
- Look at the mileage (odometer).
- Can you reach the pedals and steering wheel?
- Can you adequately see out the rear window over the seats?

What to Check

- Check the trunk for evidence of rot/damage.
- Check to ensure if there is an inflated, good spare tire.
- Is there a tire jack?
- Under the hood check for signs of collision damage, hoses and radiator leaks, cracks in hoses and belts, coolant level and battery/battery cables.
- Take a test drive and listen for sounds, test the brakes, firm steering, good suspension, any hesitations when accelerating.
- Have the vehicle inspected by a mechanic.

Driving Costs - 2019

	Small Sedan ¹	Medium Sedan ¹	Large Sedan ¹	Small SUV (FWD) ¹	Medium SUV (4WD) ¹
Operating Costs					
Fuel	8.36 cents	9.27 cents	12.77 cents	9.42 cents	13.20 cents
Maintenance, repair and tires	8.53 cents	9.18 cents	9.49 cents	9.09 cents	9.60 cents
Cost Per Mile	16.89 cents	18.45 cents	22.26 cents	18.51 cents	22.80 cents

Ownership Costs

Full-coverage insurance	\$1,328	\$1,251	\$1,221	\$1,089	\$1,114
License, registration, taxes	\$466	\$661	\$807	\$630	\$862
Depreciation (15,000 miles annually)	\$2,240	\$3,169	\$4,061	\$3,132	\$3,794
Finance charge	\$546	\$794	\$975	\$766	\$1,075
Cost Per Year	\$4,580	\$5,875	\$7,064	\$5,617	\$6,845
Cost Per Day	\$12.55	\$16.10	\$19.35	\$15.39	\$18.75

Total Cost Per Mile

10,000 total miles per year	Per Year	Per Year	Per Year	Per Year	Per Year
Cost per mile x 10,000 miles	\$1,689	\$1,845	\$2,226	\$1,851	\$2,280
Cost per day x 365 days	\$4,580	\$5,875	\$7,064	\$5,617	\$6,845
Decreased depreciation ²	-\$209	-\$233	-\$296	-\$286	-\$382
Total Cost Per Year	\$6,060	\$7,487	\$8,994	\$7,182	\$8,743
Total Cost Per Day	\$16.60	\$20.51	\$24.64	\$19.68	\$23.95
Total Cost Per Mile³	\$0.6060	\$0.7487	\$0.8994	\$0.7182	\$0.8743

15,000 total miles per year	Per Year	Per Year	Per Year	Per Year	Per Year
Cost per mile x 15,000 miles	\$2,534	\$2,768	\$3,339	\$2,777	\$3,420
Cost per day x 365 days	\$4,580	\$5,875	\$7,064	\$5,617	\$6,845
Total Cost Per Year	\$7,114	\$8,643	\$10,403	\$8,394	\$10,265
Total Cost Per Day	\$19.49	\$23.68	\$28.50	\$23.00	\$28.12
Total Cost Per Mile³	\$0.4742	\$0.5762	\$0.6935	\$0.5596	\$0.6843

20,000 total miles per year	Per Year	Per Year	Per Year	Per Year	Per Year
Cost per mile x 20,000 miles	\$3,378	\$3,690	\$4,452	\$3,702	\$4,560
Cost per day x 365 days	\$4,580	\$5,875	\$7,064	\$5,617	\$6,845
Increased depreciation ⁴	\$227	\$252	\$320	\$310	\$414
Total Cost Per Year	\$8,185	\$9,817	\$11,836	\$9,629	\$11,819
Total Cost Per Day	\$22.42	\$26.90	\$32.43	\$26.38	\$32.38
Total Cost Per Mile³	\$0.4093	\$0.4909	\$0.5918	\$0.4815	\$0.5910

Driving Costs - 2019

	Minivan ¹	1/2-Ton, Crew-Cab Pickup (4WD) ¹	Hybrid Vehicle ¹	Electric Vehicle ¹	2019 Weighted Average
Operating Costs					
Fuel	12.61 cents	15.67 cents	5.76 cents	3.65 cents	11.60 cents
Maintenance, repair and tires	8.73 cents	8.77 cents	7.70 cents	6.60 cents	8.94 cents
Cost Per Mile	21.34 cents	24.44 cents	13.46 cents	10.25 cents	20.54 cents
Ownership Costs					
Full-coverage insurance	\$1,103	\$1,236	\$1,202	\$1,203	\$1,194
License, registration, taxes	\$769	\$1,013	\$639	-\$519	\$753
Depreciation (15,000 miles annually)	\$4,036	\$3,696	\$3,087	\$5,250	\$3,334
Finance charge	\$927	\$1,228	\$789	\$848	\$920
Cost Per Year	\$6,835	\$7,173	\$5,717	\$6,782	\$6,201
Cost Per Day	\$18.73	\$19.65	\$15.66	\$18.58	\$16.99
Total Cost Per Mile					
10,000 total miles per year	Per Year	Per Year	Per Year	Per Year	Per Year
Cost per mile x 10,000 miles	\$2,134	\$2,444	\$1,346	\$1,025	\$2,054
Cost per day x 365 days	\$6,835	\$7,173	\$5,717	\$6,782	\$6,201
Decreased depreciation ²	-\$264	-\$454	-\$264	-\$312	-\$326
Total Cost Per Year	\$8,705	\$9,163	\$6,799	\$7,495	\$7,929
Total Cost Per Day	\$23.85	\$25.10	\$18.63	\$20.53	\$21.72
Total Cost Per Mile³	\$0.8705	\$0.9163	\$0.6799	\$0.7495	\$0.7929
15,000 total miles per year	Per Year	Per Year	Per Year	Per Year	Per Year
Cost per mile x 15,000 miles	\$3,201	\$3,666	\$2,019	\$1,538	\$3,081
Cost per day x 365 days	\$6,835	\$7,173	\$5,717	\$6,782	\$6,201
Total Cost Per Year	\$10,036	\$10,839	\$7,736	\$8,320	\$9,282
Total Cost Per Day	\$27.50	\$29.70	\$21.19	\$22.79	\$25.43
Total Cost Per Mile³	\$0.6691	\$0.7226	\$0.5157	\$0.5546	\$0.6188
20,000 total miles per year	Per Year	Per Year	Per Year	Per Year	Per Year
Cost per mile x 20,000 miles	\$4,268	\$4,888	\$2,692	\$2,050	\$4,108
Cost per day x 365 days	\$6,835	\$7,173	\$5,717	\$6,782	\$6,201
Increased depreciation ⁴	\$286	\$496	\$285	\$338	\$354
Total Cost Per Year	\$11,389	\$12,557	\$8,694	\$9,170	\$10,663
Total Cost Per Day	\$31.20	\$34.40	\$23.82	\$25.12	\$29.21
Total Cost Per Mile³	\$0.5695	\$0.6279	\$0.4347	\$0.4585	\$0.5331

Vehicle Ownership

Certificate of Title

- A certificate of motor vehicle title is required to demonstrate proof of ownership.

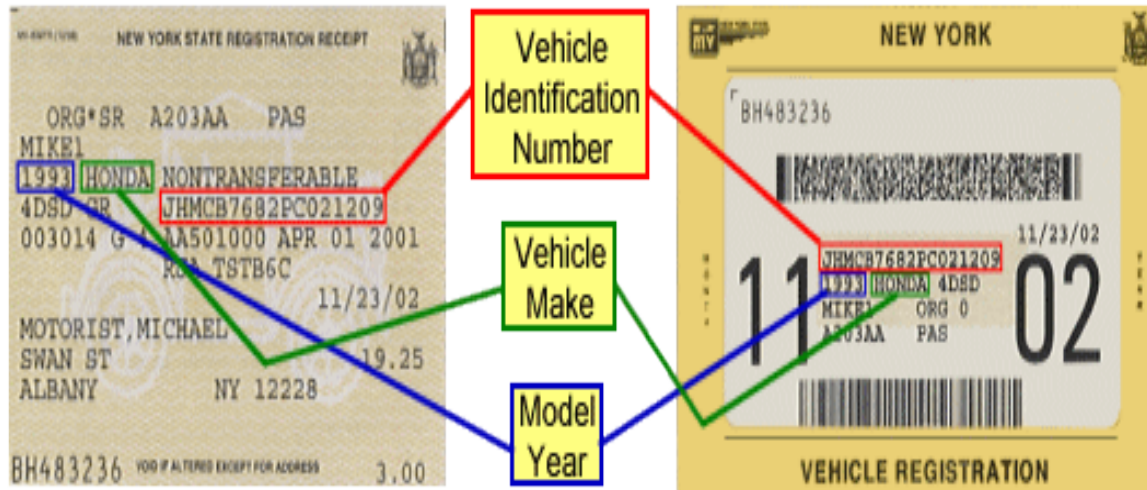
A title document shows:

- The owner's name and address
- The vehicle body style
- Number of cylinders
- Serial number
- Vehicle identification number (VIN)
- If the owner has purchased the vehicle on a time-payment plan (loan), the title also will indicate that there is a lien (debt owned) against the vehicle.

Do NOT Store This Document in Your Vehicle!

Registration

- All vehicles, trailers, and boats must be registered in New York.
- Registration costs vary based on vehicle.



New York State Inspection

- New York requires all vehicles to be inspected yearly.
- No reminders are sent by the DMV.
- The color of the sticker is changed annually.
- Things that will cause you to fail inspection:
 - Cracked or discolored mirrors
 - Deteriorated windshield wipers
 - Check engine or service engine soon light is on
 - Bad brakes
 - Bad frame, suspension, steering, and wheel fasteners
 - Bad tires
 - Incorrect window tint
 - All lights have to work
 - No fuel leaks

What Determines Insurance Rates?

- Driving record (Driver's abstract)
- Age
- Miles driven
- Driver gender
- Marital status
- Type of vehicle
- Where the driver lives and drives
- Driver's claim record
- Driver education programs
- Years of driving experience
- Credit history
- Previous insurance coverage
- Coverage and deductibles

Sample Driver Abstract

State of New York DEPARTMENT OF MOTOR VEHICLES, Empire State Plaza, Albany, New York 12228
ABSTRACT OF DRIVING RECORD

T
(SAMPLE)

Document # ALI 001
 PRINT DATE: 11/28/2011 TIME: 12:34:98 OPERATOR: I OFFICE: DAB

CLIENT ID#: 522367836
 MOTORIST, MICHELLE DOB: 01/25/1983 SEX: F
 6 EMPIRE STATE PLAZA HEIGHT: 5-6 EYE COLOR: BLUE
 ALBANY NY 12228 COUNTY: ALBA
 MI #: M15752 74568 811149-83

RESTRICTIONS: CORRECTIVE LENSES, INTERLOCK DEVICE
Record Summary Line

LICENSE CLASS: *D* STATUS: REVOKED EXPIRATION: 01/25/2018

SUSP/REV SUMMARY: TOTAL 6 (SCOFFS 1 ON 1 DATES) JUDGEMENT \$ 0

***** ACTIVITY *****
 CLASS CHANGE: 06/17/1999 NMV: *DJ* OLD: PERMIT

ACCIDENT PREVENTION COURSE COMPLETED ON: 11/22/2008
 UP TO 4 POINTS CAN BE REDUCED FROM TOTAL POINTS FROM 05/22/2007 - 11/22/2008
 N/A - NON 19-A DRIVER OR COURSE PRIOR TO 01/01/94

***** SUSPENSIONS/REVOCATIONS *****
 SUSPENSION: 02/04/2011 FEND PROSECUTION-CT ORDER #: A1102090000
 CLEAR ON: 03/07/2011 REQUIREMENTS MET

SUSPENSION: 10/20/2011 FLD PAY DRIV ASSESS ORDER #: A11020D000

SUSPENSION: 03/14/2011 INS. NOT IN EFFECT ORDER #: C1103010000

REVOCATION: 03/09/2011 DR INTOX > .08% ALCH ORDER #: D1105180000
 COMPLIED ON: 03/09/2011

REVOCATION: 05/02/2011 AGG DWI CHLD IN VEH ORDER #: D1106020000
 COMPLIED ON: 05/02/2011

SUSPENSION: 12/17/2010 TEMP - PDG C/T HRG ORDER #: H110128 T
 COMPLIED ON: 12/17/2010
 CLEAR ON: 01/02/2011 TIME SERVED

This is to certify that this document is a true and complete copy of an electronic record on file in the New York State Department of Motor Vehicles, Albany, New York. The record was made in regular course of New York State Department of Motor Vehicles daily business. It is the business of the New York State Department of Motor Vehicles to create and maintain the records of drivers in the state of New York. Entries in this document are made at the time the recorded transactions or events took place or within a reasonable time thereafter. The person who reports the information is under a business duty to do so accurately.

Continued Page 2

[SIGNATURE]
 COMMISSIONER OF MOTOR VEHICLES

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 ALBANY NY 12228 COUNTY: ALBA
 MI #: M15752 74568 811149-83

Page # 2

REVOCATION: 01/28/2011 RFSB SUB CHEM TEST ORDER #: H1102180000

SUSPENSION: 07/22/2011 FAILURE TO PAY FINE ORDER #: Z0600DH
 LOCATION: CHEMUNG COUNTY, TOWN OF VETERAN

***** CONVICTIONS/BAIL FORFEITURES *****
 CONVICTION: AGG DWI CHLD IN VEH
 VIOLATION: 12/16/2010 CONVICTED ON: 03/07/2011
 LOCATION: CHEMUNG COUNTY
 PENALTY:
 COMM VEH: NO HAZMAT: NO

CONVICTION: DRUG WITH .08% ALCH
 VIOLATION: 10/29/2010 CONVICTED ON: 02/10/2011
 LOCATION: CHEMUNG COUNTY, TOWN OF VETERAN
 PENALTY:
 COMM VEH: NO HAZMAT: NO

***** ACCIDENTS *****
 ACCIDENT DATE: 11/21/2010 PROPERTY DAMAGE COUNTY: ALBA CASE #: 33-662362
 POLICE REPORT FILED

*** END OF RECORD ***

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[SIGNATURE]
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What Do The Coverages Mean?

Kind of Insurance	Coverage	Claim Includes	Minimum Amount	Notes
Personal Injury Protection (PIP)	Medical, loss of income, and other miscellaneous expenses	<ul style="list-style-type: none"> • Medical expenses • Loss of income: Max of \$2000 a month or 80% of current monthly income • \$25 per day for reasonable expenses • \$2000 death benefit 	\$50,000/Most common is \$50,000	Required by law Also known as “No Fault Insurance”
Bodily Injury Liability	Pays claim against owner if someone is killed or injured and owner is at fault	Hospital and doctor bills, Legal fees; Court costs; Loss of wages	\$25,000/\$50,000 \$25,000 per person and \$50,000 per crash in bodily injury benefits	Required by law Most Common is \$300,000
Property Damage Liability	Pays claim against owner if property of others is damaged and owner is at fault	Other car and possessions in vehicle. Damage to house, telephone pole and traffic light.	\$10,000	Required by law

What Do The Coverages Mean?

Kind of Insurance	Coverage	Claim Includes	Minimum Amount	Notes
Statutory Uninsured Motorist	Pays for injuries sustained by you and your passengers caused by an uninsured motorist	<ul style="list-style-type: none"> You and passenger injuries 	<ul style="list-style-type: none"> \$25,000 per person and \$50,000 per accident for those accident for those that occur WITHIN NYS. Serves as supplementary insurance if outside of NYS 	Required by law
Optional Basic Economic Loss (OBEL)	This coverage provides an extra amount on top of the no-fault limit			Not Required Most common is \$25,000
Supplementary Uninsured Motorist	Extends coverage to accidents that occur outside of New York State			Not Required \$50,000 is most common

What Do The Coverages Mean?

Kind of Insurance	Coverage	Claim Includes	Minimum Amount	Notes
Medical Payments	Coverage that reimburses you and your passengers for medical or funeral expenses stemming from an accident, regardless of responsibilities	<ul style="list-style-type: none"> Medical or funeral expenses 		Not Required \$5,000 is most common
Collision	Reimburses you for damage to your own car resulting from impact with another car or an object			Not Required Most common is \$500 deductible
Comprehensive	Reimburses you for damage to your auto not caused by a collision	<ul style="list-style-type: none"> Losses include theft, hail, vandalism, or hitting an animal 		Not Required \$200 deductible is most common

Owning and Maintaining a Vehicle Learning Activity Follow-Up

1. You and a partner decided to buy a used or new vehicle, research your vehicle's mpg.
2. You calculated an auto loan at 4% (since you're young and may have limited credit).
3. You kept your calculations handy...
4. Using your previous calculations, use an insurance company website to determine which type of coverage is best for you. Keep in mind that you'll have to meet NYS insurance minimums on the previous slide.
5. Finally, use an online insurance estimator to get quotes.
6. Create a table like the one on the next slide to share your results.

Owning and Maintaining a Vehicle: Results Example

Car	New/ Used ?	Purchase Price?	Monthly Auto Payment (Based on Purchase Price at 4%) +	Estimated Insurance? +	Gas per month (# of miles driven ÷ mpg * \$3/gallon) =	Total Monthly Cost	5 Year Cost to Own (from KBB)
2017 Audi A3	New	\$45,000	\$828.74 +	\$150 +	900/27 = 33.33 gallons * \$3 = \$100	\$1078.7 4	\$60,085

You've Bought and Insured a Vehicle...

- NOW YOU HAVE TO MAINTAIN IT!
- New vehicles come with warranties based on years and miles driven and specific to the vehicle you have chosen.
- Used vehicles may or may not have transferable warranties.

Preventive Maintenance

- What is preventive maintenance on a vehicle?

The care you routinely give your vehicle to avoid trouble later is *preventive maintenance*. This attention includes not only day-to-day care, but also the periodic servicing a vehicle needs at times listed in the owner's manual.

Vehicle Maintenance

- Driving costs are affected by how well your vehicle runs. Performing regular maintenance can ensure more efficient operation and help prevent costly repairs down the road.
- Fluids: Engine oil, engine coolant, brake fluid, transmission fluid, and power steering fluid.
- Gasoline: Use gasoline with the octane rating as recommended by the vehicle manufacturer (check vehicle owner's manual).

Vehicle Maintenance

- Air filter: Captures dirt particles and ensures clean airflow to the engine. Inspect at every oil change.
- Belts: Most vehicles use a single serpentine belt to operate under-hood accessories such as the alternator, although v-belts are used in some applications. Inspect at every oil change.
- Hoses: Circulate vital liquids such as engine coolant, transmission fluid and power steering fluid. Inspect at every oil change.



Vehicle Maintenance

- Battery: Powers the starter motor, acts as a voltage stabilizer for the electrical system and makes up any shortfall when the alternator cannot meet the vehicle's electrical demands. Inspect the battery cable connections at every oil change and clean as needed. Always wear eye protection and gloves when servicing a battery.
- Tires: As the only part of your vehicle in contact with the road, tires have a major effect on ride, handling, braking and safety. For the best performance, tires must have sufficient tread depth, no signs of physical damage, and be properly inflated. Inspect tires and check inflation pressures at least once a month.

Vehicle Maintenance

- Driving for maximum fuel economy and minimal impact on the environment.
- By developing fuel saving driving habits, you can increase your fuel economy and decrease the impact on the environment throughout your driving career.



Tips to Save Fuel

- Avoid excessive idling; only takes a few seconds for modern vehicle's fluids and engines to warm up enough to drive without risk of damage.
- Do not turn your vehicle off when stopped.
- Accelerate slowly and smoothly to increase fuel economy and decrease tailpipe emissions.
- When you decelerate, lift off the accelerator early so that you do not need to apply the brakes.
- Slow down smoothly, rather than stabbing the brakes when coming to a stop.
- Use cruise control to keep your vehicle at a constant speed.

Tires

- Tire pressure not only affects fuel mileage, it also greatly affects tire life and traction.
- Never skimp on tires – look at quality, tread life, temperature rating, and traction rating.
- Check tread depth every time you have your oil changed.
- Choose the right tire for the appropriate season and places you are driving:
 - All season tires
 - Winter tires
- Rotate tires every other oil change.
- Ensure your tires are aligned.
- Ensure they have the right PSI.



Prevention is Key

- Stay alert for signs that something is not working properly and either fix it or have it repaired before there is a malfunction.
- Know the condition of the following:
 - Battery
 - Belts
 - Brakes
 - Coolant
 - Hoses
 - Tires
 - Oil
 - Windshield wipers

Prevention

- Maintain oil levels by never letting the oil get too low.
- Have a technician check your coolant levels when you get an oil change.
- Be watchful of your battery cables. Use a wire brush and clean them or have a technician clean them for you.
- Ensure that all lights are working.



Basic and Preventative Maintenance Videos



Basic Maintenance Learning Activity

- Use the internet to briefly research basic maintenance activities and fill out the Basic Automotive Maintenance Worksheet. Be prepared to share what you learned with the class.

References

1. AAA. Your Driving Costs: How Much Are You Really Paying to Drive.
<https://www.aaa.com/AAA/common/AAR/files/AAA-Your-Driving-Costs.pdf>
2. New York State Department of Motor Vehicles. Sample Registration.
<https://dmv.ny.gov/registration/sample-registration-documents>
3. New York State Department of Motor Vehicles. Sample Abstract of Driving Record.
<https://dmv.ny.gov/forms/ds2421.pdf>