



U.S. CONSUMER PRODUCT SAFETY COMMISSION
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March 25, 2020

Mr. Greg Knott
Vice President, Standards and Regulatory
Affairs
Outdoor Power Equipment Institute (OPEI)
341 South Patrick Street
Alexandria, VA 22314

Mr. Erik Pritchard
President and General Counsel
Recreational Off-Highway Vehicle Association
(ROHVA) and Specialty Vehicle Institute of
America (SVIA)
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Subject: Follow-Up to Meeting of December 9, 2019, Regarding Fire Hazards Associated with Off-Highway Vehicle (OHV) Voluntary Standards

Dear Mr. Knott and Mr. Pritchard:

Thank you for meeting with CPSC staff¹ on December 9, 2019 to discuss In-Depth Investigations (IDIs) related to OHV fire hazards. CPSC staff sincerely appreciates the independent analyses of the 84 redacted IDIs by all three standard developing organizations (SDOs), OPEI, SVIA, and ROHVA. CPSC staff and the SDOs agreed on the likely cause of fire hazards in 59 of the 84 IDIs. At the meeting, staff and the SDOs jointly reviewed the remaining 25 IDIs and established likely causes for most of the IDIs.

Please find attached an updated spreadsheet summarizing the relevant hazard description from the IDIs, with the consensus agreement on the likely causes, along with an updated list of recalls² related to OHV fire hazards. The 25 IDIs we discussed are highlighted in yellow, and contain the agreed-upon likely causes in the column on the far right.

Based on the number of IDIs in each general category of probable cause, CPSC staff and the SDOs agreed to begin focusing on two major categories:

¹ These comments are those of CPSC staff, and have not been reviewed or approved by, and may not necessarily reflect the views of, the Commission.

² The updated recall list contains recalls since the September 19, 2018 ROHVA/SVIA/OPEI – CPSC Meeting and recalls that were not included in the September 19, 2018 presentation.

1. fuel systems
2. engine/exhaust heat

For the next meeting, CPSC staff proposes that the SDOs and CPSC staff review the IDIs related to fuel systems and exhaust heat, and discuss the standards applicable to other similar vehicles, such as golf cars and personal transport vehicles. Following is a list of suggested standards to examine to facilitate the next round of discussions. The list of suggested standards should not be construed as exhaustive. CPSC staff welcomes any suggestions if the SDOs believe other standards or studies are worth considering in the next phase of our discussions.

Standard Number	Standard Name	Potential Areas of Focus
ANSI/ILTV Z130.1-2012	American National Standards Institute/International Light Transportation Vehicle Association - American National Standard for Golf Cars – Safety and Performance Specifications	Fuel System Component Structural Integrity
ANSI/ILTV Z135-2012	American National Standards Institute/International Light Transportation Vehicle Association - American National Standard for Personal Transport Vehicles - Safety And Performance Specifications	Fuel System Component Structural Integrity
UL 94	Underwriters Laboratory Standard for Safety of Flammability of Plastic Materials for Parts in Devices and Appliances	Flammability Characteristics of Plastics, Test Methods and Potential Metrics
ASTM C1055	American Society for Testing and Materials International Standard Guide for Heated System Surface Conditions that Produce Contact Burn Injuries	Guidance on Surface Temperature Limits to Mitigate Burn Hazards
ASTM D3763	American Society for Testing and Materials International Standard Test Method for High Speed Puncture Properties of Plastics Using Load and Displacement Sensors	Procedures (methods, instrumentation, etc.) for Quantifying Impact Attenuation of Plastic Body Panels
SAE J2044	Society of Automotive Engineers Standard for Quick Connect Coupling Specification for Liquid Fuel and Vapor/Emissions Systems	Fuel Hose Connection Structural Integrity

CPSC staff would also like to resume discussing the ROV debris penetration issue. CPSC respectfully asks the SDOs to reexamine the eight redacted IDIs provided before the December 9, 2019 meeting. CPSC staff would like to know the SDOs’ perspective on the potential failure modes (how branches make their way into the wheel wells and puncture the floorboards) and potential performance requirements to mitigate the debris penetration hazard.

Mr. Greg Knott and Mr. Erik Pritchard
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We look forward to continuing our dialogue on OHV fire and debris penetration hazards. We will contact you to schedule a convenient date and arrangements for everyone to meet.

Sincerely,

A handwritten signature in black ink, appearing to read "Han Lim". The signature is fluid and cursive, with the first name "Han" and last name "Lim" clearly distinguishable.

Han Lim
Mechanical Engineer
Division of Mechanical and Combustion Engineering
Directorate for Engineering Sciences

Enclosures (2):

- 1 – Updated Recall List, Post September 19, 2018 meeting – 1 page
- 2 – Spreadsheet containing 84 fire hazard IDIs – 8 pages

cc: Patricia Edwards, CPSC Voluntary Standards Coordinator

CPSC RECALLS – OFF-HIGHWAY VEHICLES, FIRE HAZARD

Each recall is hyperlinked to each CPSC recall webpage for convenience.

Table 1 - Recalls that have occurred since the 9/19/18 Meeting

Product	Recall Number	Number of Affected Units	Recall Date	Reason for the recall
ATV	18-233	5,300	9/26/2018	Fuel hose can crack and fuel can leak from the vehicle
UTV	19-707	350	10/24/2018	Fuel tank neck can crack
ROV	19-714	56,000	11/8/2018	Incorrectly installed throttle body can ignite
ROV	19-726	200	3/5/2019	Fuel hose leak
UTV	19-728	2,600	3/14/2019	Fuel tank cap gasket can crack and oil cooler hoses can separate
UTV	20-727	72,000	3/19/2020	Debris can ignite on the vehicle's exhaust manifold; and frozen water can block the breather hose allowing oil to leak, posing a fire hazard.

Table 2 – Recalls that were not included in the 9/19/18 Presentation

Product	Recall Number	Number of Affected Units	Recall Date	Reason for the recall
ATV, ROV, UTV	17-751	6,600	6/20/2017	Fuel gauge retainer can collapse and leak fuel, posing a fire hazard
ATV	17-204	15,000	8/10/2017	Fuel tap can leak fuel
ATV	17-218	20,000	9/6/2017	Fuel tap or carburetor can leak fuel
ATV	18-011	6,300	10/17/2017	Exhaust failure can overheat nearby components
ROV	18-207	1,500	8/23/2018	Fuel can leak from the fuel tank

	IDI Number	Narrative Summary from IDI	Fire	Injury	Vehicle	Agreed Upon Probable Cause
1		A no injury incident occurred when a parked ATV started to smoke while the ignition key was in the "OFF" position and also after the key was removed from the ATV and the "RUN" switch was in the "OFF" position. The engine then started and ran, then shut off and started to turn over again. The owner of the ATV disconnected the battery cable, which disabled the ATV. The ATV's faulty Electronic Control Module (ECM) was replaced.	N	N	ATV	Electronic Control Module
2		This incident involved a four-wheeled ATV that had problems shutting off after it became wet from usage and washing. The ATV was never submerged. The ATV also started smoking while at the dealership. The problem is believed to be with the Electronic Control Module (ECM). There was no fire or injuries in connection with this ATV. Damage is estimated at less than five hundred dollars.	N	N	ATV	Electronic Control Module
3		This incident involved -- that started smoking while in the back of an enclosed trailer. The consumer disconnected the battery and the smoking ceased. According to the service dealership the problem is believed to be with the Electronic Control Module (ECM) for the ATV. There was no fire or injuries in connection with this ATV incident. Damage is estimated at less than five hundred dollars.	N	N	ATV	Electronic Control Module
4		There were no injuries when the adult male owner of a 6-wheel Utility Vehicle ³ observed the vehicle, which was parked in the "off" position, in flames. The fire was extinguished. The owner of a repair shop determined that the electronic control module (ECM) installed in the vehicle had over-heated and ignited. The owner reported the incident as he determined that it did not appear to be covered under previous recalls for a similar issue. Property damage was limited to the vehicle.	Y	N	ATV	Electronic Control Module
5		A consumer was preparing to wash a 5 year old ATV when he noticed smoke and flames coming out of the radiator area. The consumer extinguished the flames with a hose. Examination of the ATV discovered the ECM had overheated. No property damage or injuries occurred.	Y	N	ATV	Electronic Control Module
6		The complainant was driving his four wheeled ATV through some 3' high grass adjacent to a swamp. It appears the grass caught on fire, igniting the ATV and the complainant's pants. He jumped off the ATV to extinguish the flames on his pants. Five acres of grass along with the ATV were destroyed in the fire. There were no injuries.	Y	N	ATV	Grass/Debris
7		During a 4-month period of operation in the summer of 2008, a 46-year-old male complainant and his household experienced 3 fires in a four-wheeled off road utility vehicle with side by side seats and car-like controls. The fires all occurred in the vicinity of a brake that engages the drive shaft that powers the vehicle's rear wheels. A metal flange under the brake caught and accumulated vegetable matter which was ignited by the heat of the brake. The complainant sustained 1st degree burns on one occasion.	Y	Y	UTV	Grass/Debris
8		A 63 year old male used his utility vehicle (UTV) for some yard work and transportation. He parked the UTV near the home's attached garage. Approximately 60-90 minutes later he heard a loud explosion and found the UTV engulfed in flames. The fire spread to the home and caused approximately \$100,000 in damage. There were no injuries. Smoke alarms activated. An independent engineer blamed the fire on a battery cable while the manufacturer blamed it on debris in/around the muffler.	Y	N	UTV	Unexplained
9		On July 17, 2016, the Consumer's 18-year old son was driving a UTV through a recently mowed ditch across the street from their farm. Dried grass accumulated on a ledge on the engine housing and caught fire due to its proximity to the exhaust pipe. No individual was injured or sought medical treatment related to this incident. The repair cost to the UTV was estimated at \$700.	Y	N	UTV	Grass/Debris
10		A man was riding a UTV with his two children for about an hour, when they got off the UTV it ignited. The man stated they had been riding in a corn field and corn stalks had gotten stuck in the exhaust pipe causing the fire. No injuries were sustained.	Y	N	UTV	Grass/Debris
11		Consumers smelled gasoline odor in their home and found gasoline pooled under a new youth-size 110cc ATV stored in an attached garage. The ATV had been operated the day before for around 1-1/2 hours by their 7-year-old son. The fuel appeared to be actively leaking from an unidentified location in the fuel system. No injuries or fire incident resulted.	N	N	ATV	Fuel System Component

³ For this IDI, the subject vehicle is described as a utility vehicle. However, CPSC staff determined the subject vehicle is an all-terrain vehicle.

12		The consumer complained that the ATV that she purchased for her 5 year old son, was not safe. She stated that the brakes on the ATV must be pressed when starting the unit or it could start in gear and take off without warning. The consumer also complained that the chain continuously popped off, and the unit leaked gas. The ATV was not equipped with a front brake or a neutral indicator light. No injuries were sustained.	N	N	ATV	Fuel System Component
13		A 61 year-old male was operating a four wheeled utility vehicle (UTV) on a forest road, with his 53 year-old wife and three grandchildren as passengers. The UTV reportedly stalled and subsequently caught fire, eventually burning approximately 140,000 acres of forest. No injuries were reported. A subsequent test of an exemplar unit determined the most likely cause of the fire was a failure of one of the plastic connectors or plastic cap in the fuel system located directly above the engine which broke and allowed gasoline to spray on the engine and exhaust manifold.	Y	N	UTV	Fuel System Component
14		A 74 YOM reported a gas tank leak from a previously recalled (# - - -) and repaired four wheel ATV gas tank. The consumer notified the manufacturer, who declined repair due to the expired warranty. No injuries or damages resulted.	N	N	ATV	Fuel System Component
15		A male, age unknown, was riding a UTV along a trail with friends. He had been riding off and on for approximately 2 hours. Approximately 20 minutes prior to the incident the driver felt the unit stutter but it immediately began to perform normally. The driver felt heat, heard a poof, and saw flames simultaneously. He jumped off the unit while being sprayed with fuel. The flames came into contact with the fuel on the driver and caused 2nd and 3rd degree burns on the driver's lower leg. The fire was extinguished by using ice and water from a cooler and cups of dirt. The owner or the unit indicated that excessive heat has always been generated by the motor in this unit.	Y	Y	UTV	Fuel System Component
16		16 YOF with 2nd and 3rd degree burns to her right leg and ankle. While riding a friend's four wheeler which was leaking gas, a spark ignited her pants leg. She was taken to the hospital where she was treated and admitted. FD not involved.	Y	Y	ATV	Fuel System Component
17		A 40-year-old male victim passenger and a 42-year-old female driver were riding a four-wheeled, all-terrain vehicle (ATV) on a Forest Service Trail at the 9000 to 9500 foot elevation on a relatively smooth trail with a slight incline. They could hear what they thought was the gasoline boiling in the fuel tank. When the male victim removed the fuel cap, gasoline began spraying out onto both riders. The gasoline burned the victim's head and the female's left foot and right leg. The female also sprained her ankle while attempted to quickly get away from the ATV.	N	Y	ATV	Fuel System Component
18		A 58 year old male had ridden a four wheel all-terrain vehicle (ATV) for approximately two hours when he noticed that the gas tank was 1/4 full. He took the ATV to a gas station to fill it up, and as he loosened the gas cap, he heard a hissing noise. He waited for the hissing to cease and as he removed the cap, fuel gushed out of the tank over the quad and down the motor. There were no injuries sustained in the incident.	N	N	ATV	Fuel System Component
19		Complainant, a 67 year old male, reported that while unscrewing the gas cap located on the top of his All-Terrain Vehicle (ATV) it ejected gasoline on him and the ATV. Complainant said he noted hearing the gasoline boiling in the gas tank while removing the gas cap. Complainant was not injured but felt this was a potential fire and safety hazard.	N	N	ATV	Fuel System Component
20		A 44-year-old male consumer took a break from riding his four-wheel, all-terrain vehicle (ATV) when he heard a gurgling sound coming from the fuel tank. The consumer removed the fuel cap and gasoline spurted out. Gasoline splashed on him, as well as the ATV motor, creating a fire hazard. There was no fire. The man had been riding in a rural area for about 90 minutes.	N	N	ATV	Fuel System Component
21		A 45 year-old male ATV rider and his 40 year -old brother observed several problems with his newly purchased ATVs that he and his brother were riding for the first time within a state recreational park. The problems included gasoline spraying from the fuel cap/vent, chains coming dislodged on numerous occasions, tire over pressurized, and various electrical problems. No injuries occurred while riding the ATVs.	N	N	ATV	Fuel System Component
22		A 57 year old male and his 55 year old wife were riding in there UTV and driving to the gas station to refuel. The husband got out to refuel and opened the gas cap. He immediately heard a "whoosh" sound and flames came from the gas tank spout. The flame singed the hair on his right arm. His wife cut her leg trying to get out of the UTV. A stranger at the gas station extinguished the flame. The husband and wife did not require medical attention.	Y	Y	UTV	Fuel System Component

23		Consumer he had been operating the Incident Utility Terrain Vehicle (UTV) this day for about 15-20 minutes when he decided to pull into a gas station to fill the vehicle up with gas. At the station Complainant shut the UTV off and slowly removed the gas cap from the UTV's gas tank to allow the pressure inside the gas tank to release slowly. Upon reaching for the fuel nozzle on the gas pump Complainant stated he happened to look back at the UTV's gas tank and noticed flames coming out of the gas tank via the opening of the removed gas cap. Upon seeing the flames Complainant immediately placed the fuel nozzle back onto the gas pump then he grabbed the UTV's gas cap and screwed it back onto the fuel tank which then extinguished the flames. No injuries or deaths were reported.	Y	N	UTV	Fuel System Components
24		Complainant, a 54 yr. old male, filed an on-line complaint indicating that the Utility All-Terrain Vehicle he purchased in Dec 06 was a possible fire hazard. He related that while preparing to take it out for a drive he noted the odor of gasoline. While inspecting the engine compartment he saw that the gasoline was leaking from the area where the gas line connects to the fuel inlet to the carburetor. Complainant felt that the spring type clamp was not holding the line tight enough and he replaced it with a screw type clamp.	N	N	UTV	Fuel System Components
25		An 8 year old female riding as a passenger on an ATV being operated by her 13 year old female cousin received second and third degree burns to her right wrist and right leg, when the ATV burst into flames from an overheated gasoline line that melted and spilled the gas on to the hot engine. The victim was in front of the operator learning to work the gears when the incident occurred. The victim was transported to a local hospital where she was treated and released. The operator received minor heat burns to her legs that required no medical treatment.	Y	Y	ATV	Fuel System Components
26		A 56 year-old male consumer brought his 2015 model UTV in for service citing that there was a strong smell of fuel in the cab of the UTV while it is being operated. It was found that the fuel vent tube was kinked, which in turn collapsed the fuel tank and damaged the vent in the tank. The tank vent tube and tank vent valve were replaced. Additionally, the gas vent line was re-routed to prevent pinching. The problem has not reoccurred since the gas vent line was re-routed. No injuries were reported.	N	N	UTV	Fuel System Components
27		On 12/10/2016 a utility vehicle (UTV) caught fire while it was in use. There were no injuries and property damage consisted of some burnt wiring and plastic body parts with smoke on them. The cause of the fire appears to be from a fuel line that was leaking as a result of an error made by the service department of the local retailer.	Y	N	UTV	Fuel System Components
28		No injury occurred to a thirty-six-year old female who while in the process of backing off a four wheel ATV from a trailer it was secured to noticed that the fuel tank for the ATV was leaking fuel. Upon closer examination it was discovered that there were cracks in the fuel neck for the fuel tank of the ATV as well as another ATV made by the same manufacturer with model and year.	N	N	ATV	Fuel System Components
29		No injury occurred to a twenty-four-year old male who was in the process of plowing his driveway with his ATV when he noticed that the filler neck for the gas tank for the ATV was leaking. Upon closer examination he noticed that the threads for the filler neck appeared to have developed cracks.	N	N	ATV	Fuel System Components
30		A 36 year old male reported a leaking fuel tank on his 2004 model year all-terrain vehicle (ATV). While he was riding the ATV in early August of 2009, the complainant noticed gasoline was leaking into the spill chamber surrounding the neck of the ATV's fuel tank. He discovered a crack in the neck of the fuel tank. The incident did not result in any injuries, fire, or property damage. In 2005, CPSC issued a recall involving fuel leaks on 2005 model year ATVs of the same brand.	N	N	ATV	Fuel System Components
31		A male consumer was not injured when he noticed gasoline leaking from the fuel tank located under the passenger seat of his utility vehicle. He discovered that the fuel begins to leak when the tank is full and the utility vehicle is turned on without moving. He believes the leaking gasoline is a fire hazard.	N	N	UTV	Fuel System Components
32		A male while entering his garage discovered that the fuel tank on his UTV was leaking. He discovered that the plastic tank had failed near the base of the tank opening for the fuel pump. He discovered on-line that his model and serial # were specific to the recall but his VIN was not. There were no injuries.	N	N	UTV	Fuel System Components

33		The plastic fuel cap on a 4-wheeled All-Terrain Vehicle (ATV) cracked. This allowed fuel to seep out and get on the 13-year old operator of the vehicle. His mother noticed the strong smell of gasoline on the boy's clothing when he came into the house after putting up the ATV. The boy's mother is concerned that the cracked fuel cap presents a safety problem. She feels that leaking fuel might be ignited.	N	N	ATV	Fuel System Components
34		A 12 year old male riding an ATV on dirt road at his grandfather's farm had the plastic gas cap split for unknown reasons. Consumer claims the tank was not over-filled nor was the cap over-tightened. As a result gasoline was spewed on him as well as running down to the hot engine. He was wearing a helmet and he was not injured.	N	N	ATV	Fuel System Components
35		A Store Manager for an ATV Dealer provided information that he was aware of ten incidents in which consumer's had reported that the fuel tanks on their 2003 and 2004 model year All-Terrain Vehicles had developed gas leaks from the location of either the fuel shut off valve or the fuel cap on their particular model units. He was not aware of any injuries or fires associated with these incidents.	N	N	ATV	Fuel System Components
36		The complainant is a 47-year-old male who purchased a used, child size, All Terrain Vehicle (ATV) and unloaded it from the bed of his pickup truck. As he was removing this ATV, gasoline started spilling down from its gas cap/gas tank. He examined the ATV and found that the plastic inlet filler to the fuel tank was torn along its circumference. The complainant feels that this was a design defect. He is concerned that a child who rode this ATV could be immersed in spilled gasoline and be injured. There were no injuries as a result of this incident.	N	N	ATV	Fuel System Components
37		A 44-year-old male consumer reported that since purchasing his 2003 four-wheeled ATV, gasoline leaked from around the gasoline cap and would spill down into the grooved overflow onto the tank. When he recently tightened the plastic gas cap in order to stop the leak, the filler neck cracked at the threads. The consumer replaced the entire gas tank assembly and has had no problems. He was not injured.	N	N	ATV	Fuel System Components
38		A 2008 model year, UTV has a leaking fuel tank or fuel system. The consumer claims the leak is located below the circular metal fuel plate that covers the fuel pump assembly. Consumer explained that he observed warped plastic under the metal plate. When the fuel tank is over half full, the leak in the fuel tank occurs. Consumer stated he is very reluctant to utilize the UTV due to fire and burn concerns. No injuries have occurred with the product.	N	N	UTV	Fuel System Components
39		The approximately one inch diameter black rubber fuel tank grommet melted and allowed approximately ten gallons of gasoline to leak out of the 4 wheel ATV fuel tank. The grommet is located on the bottom of the fuel tank where the fuel line enters the fuel tank. The ATV was parked for about one month in a residential attached garage when this fuel leak occurred. There were no injuries.	N	N	ATV	Fuel System Components
40		The respondent is a 57-year-old male who used the --- on 6-11-2006 to go to the corn field. He used it for about 1 hour. He parked it at 5 PM, at 10 PM a small explosion was heard and he looked out the window of his home. The -- was on fire. The respondent ran out, extinguished the fire and discovered the positive terminal on the battery had exploded causing the fire. There was extensive damage to the --- rendering it inoperable. There were no injuries associated with this incident.	Y	N	ATV	Battery
41		An eight year old male victim and his grandfather were attempting to start a four wheel all-terrain vehicle. The victim removed the seat of the ATV to check the battery and tried to start the machine again and it burst into flames. The victim's grandparents pulled the victim away from the ATV and extinguished the flames with water. There were no injuries in the incident.	Y	N	ATV	Unexplained
42		59 year old victim reported that while riding his UTV, it spontaneously caught fire. Victim reported odor of burning rubber / plastic just prior to the fire. Victim stated vehicle was destroyed and that he was unable to save vehicle. Victim stated the fire started in the battery area of the vehicle. Victim had only had vehicle for eight days. The victim was not injured.	Y	N	UTV	Out of Scope – Battery Powered UTV
43		A 74-year-old man used his utility vehicle (UTV) to pull a tree limb around his property. After he pulled the limb, the man went to start the UTV and it would not start. He felt the battery and it was hot to the touch. He replaced the battery with a new one and started the UTV. Almost immediately, the positive battery terminal or positive battery cable started to smoke and produce small flames. The man used his hand to extinguish the fire. He sustained a minor burn to his thumb. He gave himself first aid for the injury. There was no further property damage as a result of the fire.	Y	Y	UTV	Unexplained

44		The victim is a 50-year-old paraplegic male who incurred severe thermal burns to his right leg after operating his four-wheeled, all-terrain vehicle (ATV) for approximately four hours. The victim does not have any feeling in his legs and did not realize that he was injured until he had dismantled the ATV and saw that his jeans were dripping with blood. The victim sought medical attention several days after the incident. He believes the vehicle should be redesigned to prevent the heat from the starter assembly from contacting the operator's legs.	N	Y	ATV	Unexplained
45		A 36 year-old male reported that the power to the digital display of his four-wheeled all-terrain vehicle (ATV) shut down while he was driving the ATV, which caused the ATV to stop running. The complainant claimed he left the ATV for approximately five minutes. When he returned, he saw the rear of the ATV was on fire. The complainant said he ran back to his campsite and grabbed a fire extinguisher. When he returned, he found the majority of the ATV consumed by the fire. No injuries were reported.	Y	N	ATV	Unexplained
46		A 39 year old male reported a fire hazard from a youth size four-wheel all-terrain vehicle (ATV). The new ATV began smoking after 30 minutes of use by a 6 year old female. A brake line was found to be resting against the positive terminal post of the starter solenoid and this appeared to have caused a short circuit. There were no injuries and no flames were observed. Two more identical ATVs were found that appeared to be prone to the same hazard.	N	N	ATV	Electrical Unknown
47		An adult male reported three separate incidents involving two identical 4-wheeled ATVs. In each incident, the wiring harness on the ATV overheated, and the operator of the ATV observed smoke and the smell of burning plastic. Each incident occurred as the operator was attempting to start the ATV. Each time, use was immediately discontinued, and no one was injured in these incidents. Damage appears to have been confined to the wiring harness in each incident.	N	N	ATV	Wiring Harness Short
48		A 36-year-old male complainant reported that while out for a drive in the desert with his family in their utility vehicle (UTV), his spouse noticed the smell of burning plastic. He found that the right rear corner of the vehicle was on fire, with three to four inch high flames. After putting the fire out, the complainant saw that the taillight assembly and cargo box were damaged by the fire. No one was injured as a result of this incident. The UTV had been recalled for a problem with an electrical short in the taillight wiring harness, of which the complainant was unaware.	Y	N	UTV	Wiring Harness Short
49		The 48 year old female consumer's husband (age 56) started the ATV in the backyard of the home and left it idle for approximately 15 minutes. He walked away and noticed smoke coming from the backyard. He discovered that the ATV was on fire. He used a garden hose to extinguish the flames. The official fire report indicates that the item first ignited was the electrical wire and/or cable insulation. The consumer and her husband did not sustain any injuries.	Y	N	ATV	Unexplained
50		A five year old male was not injured when smoke and flames were seen emanating from the front fender and handlebars of his ATV. The victim was seated on the ATV while his parents attempted to crank the product. Before the ignition engaged, flames and smoke were seen. The flames were extinguished with a wet towel. Melting was discovered on several wires.	Y	N	ATV	Unexplained
51		A 47 year old male was driving his new UTV with his 17 year old daughter. He had driven the vehicle on his property on dirt roads for about one mile, traveling about 5 miles/hour, before he stopped. He left the engine running and he and his daughter went into the house for about 1-2 minutes. When he returned, he saw 8" flames shooting from the wiring harness underneath the driver side. The UTV engine was no longer running. He quickly grabbed a garden hose from the house and extinguished the fire with water, preventing injury and further property damage.	Y	N	UTV	Unexplained
52		On approximately September 1, 2013 a consumer reported he walked by his 4-wheel ATV and discovered the voltage regulator was on fire. The consumer had previously ridden the unit for approximately 10 minutes before shutting it off and parking it. Approximately 1 hour later he discovered smoke and a 3 inch flame coming from the regulator. He disconnected the battery which extinguished the flames before any damages to the unit or property was sustained. No injuries were reported following the incident.	Y	N	ATV	Voltage Regulator
53		A 40 year-old male reported the voltage regulator of his four-wheeled utility vehicle (UTV) began to emit smoke shortly after the UTV was started. The consumer reported the plastic covering for the regulator began to melt during the incident. The consumer immediately turned off the UTV and the smoke ceased. No injuries were reported.	N	N	UTV	Unexplained

54		The complainant is a 35-year old male. The ATV exhaust pipes got too hot causing a melting of the between the engine and operator and passenger legs. There were no injuries.	N	N	ATV	Exhaust Overheat/ Inadequate Heat Shielding
55		A 57-year old man was riding his 4-wheeled All-Terrain Vehicle (ATV) in the sandy bottom of a river bed for several hours. Heat generated by the ATV's exhaust pipe caused a skin/blister burn to the side of his right leg. The ATV Rider/Owner indicated that the small 2 piece heat shield on the exhaust pipe and the ATV's plastic cover over the exhaust pipe/heat shield did not provide adequate protection from the heat generated by the exhaust pipe.	N	Y	ATV	Exhaust Overheat/ Inadequate Heat Shielding
56		A consumer reported that it become very hot near the exhaust pipe on the side of his two new 2016 model year, four-wheel ATVs. The consumer's grandchildren, a 9 year old female and a 7 year old male, received minor burns to their legs and tennis shoes when their legs and feet came in close contact with the exhaust area on the ATVs. No professional medical treatment was sought for the burns. The ATVs were fixed with new heat shields for the exhaust area by the dealership.	N	Y	ATV	Exhaust Overheat/ Inadequate Heat Shielding
57		The consumer purchased a utility vehicle for family recreational purposes. The consumer and his son noticed that the vehicle was running hotter and louder with each use. When the consumer's 17-year-old daughter and her friend returned home, the consumer noticed that it was especially loud and the muffler compartment was extremely hot. Upon examination, he noticed what he explained as burn damage around the muffler and motor area. No injuries occurred. The consumer is concerned about a design flaw that does not allow proper ventilation for the muffler/motor area.	N	N	UTV	Exhaust Overheat/ Inadequate Heat Shielding
58		On June 15, 2017 a UTV was being test driven at a dealership by the dealership owner and his father. At the conclusion of the test drive, a flame was observed coming from the heat shield near the exhaust pipe. The operator of the UTV was able to blow out the flame with his breath before the fire could spread to other parts of the unit. No injuries were reported.	Y	N	UTV	Unexplained
59		A 29 year old male reported that improper heat protection caused plastic to melt on his all-terrain vehicle (ATV). The complainant noticed that while riding the ATV, the area around his right leg seemed excessively hot. He found that plastic in the area had melted. A dealership put heat tape on the plastic to act as a heat shield and replaced a plastic panel. However, the plastic melted again. There were no injuries.	N	N	ATV	Exhaust Overheat/ Inadequate Heat Shielding
60		Complainant advised that he was aware of two different consumers with overheat incidents involving their UTV's. Complainant advised that he did not have any documentation for the actual complaints, and had the victims contact this investigator. Interviews with both victims revealed that their UTV's overheat in the console area and get hot enough that they were concerned about potential fires and injuries. Victim #2 indicated that the dealer added additional heat shielding to his vehicle.	N	N	UTV	Exhaust Overheat/ Inadequate Heat Shielding
61		A 43 year-old operator of a 4 wheel ATV observed excessive heat being generated while riding his ATV on numerous occasions on public ATV riding trails, and culminated in the July 12, 2014 incident when his 41 year-old wife sustained a first degree burn/redness on her lower right leg while as a passenger on his ATV. In addition, the excessive radiant heat reportedly caused her right boot to leave a scorch mark on the ATV. No medical treatment was sought.	N	Y	ATV	Exhaust Overheat/ Inadequate Heat Shielding
62		The heat shield came off a sports utility vehicle (UTV) and caused the plastic base of the seat to melt away, exposing the foam interior of the seat. A man reports that his 58-year-old wife got headaches from fumes produced when the foam inside the seat of their used UTV overheated. He also reports seeing dark grey smoke coming from the seat area of the UTV and noticing a burning odor. There are no other injuries in this incident. Damage was confined to the incident vehicle.	N	N	UTV	Exhaust Overheat/ Inadequate Heat Shielding
63		The Consumer was operating a Utility Terrain Vehicle (UTV) for about an hour when he noticed a burning plastic smell emanating from the vehicle. He stopped the UTV, shut the unit off, and started to inspect the vehicle in hopes of finding the cause of the burning plastic smell. Upon inspecting the UTV Complainant discovered an oblong shaped hole on the bottom of the cargo box directly behind the cab. The hole in the cargo box was due to the exhaust pipe on the UTV overheating and melting a hole completely through the cargo box at the exact location where the box sits above the exhaust pipe. Consumer noted the UTV has no heat shield between the vehicle's exhaust pipe and the plastic cargo box. No injuries or deaths were reported.	N	N	UTV	Exhaust Overheat/ Inadequate Heat Shielding

64		As a 57 YOM was driving his 4 wheeled UTV with his wife, he detected a smell of burning plastic. Almost at the same time, his friend driving in a separate vehicle behind him, saw flames emitting from the UTV. The 57 YOM stopped his UTV and observed 6" -8" flames emitting from the right side vent. Water from two water bottles and sand were used to extinguish the flames and prevent injury. This was the first time the UTV had been used after recall repair work was completed. The driver examined the UTV and saw that the front box heat shield was missing. The damaged UTV cost \$1,824 to repair.	Y	N	UTV	Exhaust Overheat/ Inadequate Heat Shielding
65		In mid-January 2016, the consumer and his juvenile daughter were riding Unit #1 in his yard when he smelled smoke. He stopped the unit and observed flames coming from behind the passenger seat. He removed his daughter and extinguished the fire with snow from the ground. After the fire, he advised that he contacted the dealership and reported the incident. The consumer noticed melting of the passenger side rear splash panel on the unit. There were no injuries or other damages reported.	Y	N	UTV	Exhaust Overheat/ Inadequate Heat Shielding
66		On September 19, 2016 and after hearing of his nephews UTV fire, the consumer removed the passenger seat and observed melting to the rear wall. This damage appears to have come from the exhaust system burning through the heat shield behind the rear passenger compartment. There were no reported injuries or other damage.	N	N	UTV	Exhaust Overheat/ Inadequate Heat Shielding
67		After the repair to a UTV was complete based on a safety bulletin, the vehicle caught on fire after the first use. The heat shield was missing. There were no injuries.	Y	N	UTV	Exhaust Overheat/ Inadequate Heat Shielding
68		While using his 4 wheel ATV to pull a small disc it caught on fire so the driver drove to a nearby water ditch and attempted to douse the flames with his baseball cap. After about 15 minutes friends showed up with a bucket and threw water on the ATV to put the fire out. ATV incurred fire damage to the vehicle's engine area, gas tank, wiring, and plastic parts near the engine. The ATV was repaired within weeks. Upon bringing home the ATV the man started it up and let it idle for about 10-15 minutes but then a plastic side panel near the ATV's muffler got hot and showed signs of melting. Cause of the plastic panel getting hot and showing signs of melting was due a missing heat shield between the ATV's muffler and the unit's engine. No injuries or deaths were reported.	Y	N	ATV	Exhaust Overheat/ Inadequate Heat Shielding
69		A 47-year-old male took his brand new UTV out for his first ride. He drove for approximately 30 miles at 20-30 miles per hour, then stopped for lunch. Shortly after, while driving approximately 10 miles per hour, the vehicle engine quit and the shifting gear broke. The consumer then noted black smoke coming from the right rear tire area and passenger side. He got out and saw flames near the engine. He used a two liter bottle of water to extinguish the flames. No injuries occurred. The consumer took the vehicle into the dealer two days later where it was ultimately determined that a heat shield was not installed at the time of manufacturing, causing the fire.	Y	N	UTV	Exhaust Overheat/ Inadequate Heat Shielding
70		A child was riding a youth sized All-Terrain Vehicle when his father noticed that the ATV appeared to be smoldering. He told the child to get off the unit so that he could inspect it and subsequently discovered that a fire had ignited around the oil reservoir and engine area. The fire was extinguished with water and a fire extinguisher. No one was injured during this incident and damaged occurred only to the ATV.	Y	N	ATV	Unexplained
71		An adult male was giving his three-year-old twins a ride on a four-wheeled ATV at his cabin. The operator stopped and lifted one of his sons off of the machine. The child was standing next to the ATV when the father noticed that one of the oil lines leading to the oil cooler had loosened at its metal fitting and was spraying hot oil. No injuries. Another oil line on the ATV had detached from its metal fitting in June 2005 and had leaked oil.	N	N	ATV	Oil Leak
72		A 32-year-old male was not injured when an oil pressure hose detached, spraying hot oil onto his clothing, while he was driving a new UTV for the first time. The incident occurred after only three miles of use. He was wearing a long sleeved shirt, therefore he was not burned. There were no other injuries or damages to the victim or UTV during this incident.	N	N	UTV	Oil Leak
73		A 2017 model year, four seated, UTV caught fire while in operation. Flames coming from the back of the vehicle were noticed by the passenger. The fire consumed the entire vehicle for a total loss after attempts to extinguish it failed. The 30 year old male driver, his wife, and two children were not injured in the incident. The vehicle was purchased on November 25, 2016. Initial conclusions by the manufacturer indicate that the incident was likely the result of a slow oil leak.	Y	N	UTV	Unexplained

74		A UTV caught fire at a recreational riding sand dune state park while 2 adults were occupying it sitting with the engine at idle. Both occupants escaped without injury, however the UTV was destroyed. The --- model was recalled --- under Recall Number --- due to the engine can overheat and the turbo system's drain tube can loosen, posing a fire hazard. The incident UTV had previously had subject recall bulletins performed.	Y	N	UTV	Unexplained
75		A 56 year old male was driving approximately ten minutes into a ride on his 2016 Utility Vehicle (UTV), when a passenger in the vehicle observed flames through the slots where the six point harness connects to the vehicle. The driver immediately pulled over, stopped the engine, and, along with the passenger, got off of the vehicle. The fire was believed to be coming from the area of the turbo charger. The driver was able to extinguish the fire using dirt from the surrounding terrain. The driver sustained burns to his arms and neck, from what was determined to be hot oil. The passenger was unharmed. The vehicle had just transitioned from a paved road to a dirt road at the time of the incident.	Y	Y	UTV	Unexplained
76		No injuries or property damage occurred when flames were observed coming from the front right corner of a four-wheeled ATV at a consumer's home. The 47 year-old male consumer believes that the brake line leaked fluid, which eventually caught fire.	Y	N	ATV	Unexplained
77		On June 23, 2017, a four-wheel utility vehicle (UTV) caught fire while being ridden by the consumer, age 19. The consumer's brother, the victim, an adult male age 25, sustained minor burns to his left hand and right arm while trying to put 6-7" orange and red flames out with water. The flames were coming from the air filter within the engine compartment. The fire was contained to the UTV.	Y	Y	UTV	Unexplained
78		A 62 year-old male sustained no injury when the drive clutch assembly of his ATV caught fire while he was operating it. The complainant's property consisted of 160 acres on which he drove the ATV exclusively. He was not wearing a helmet. He dismounted the ATV and shut off the engine. The fire self-extinguished. The ATV was repaired. This component failed twice on this ATV.	Y	N	ATV	Engine One-Off's
79		A 57-year-old female was operating a new, four-wheeled, 500cc, all-terrain vehicle on a designated ATV trail when the left side of the vehicle began to generate a substantial amount of heat near the clutch housing. The operator's lower left leg became so hot at times that she had to put her leg up on the fender while riding or stop the ATV. After riding for approximately 160 miles over two days, the consumer sustained blister burns to her inner left calf. The consumer saw a doctor for her injury and obtained a prescription cream to treat the burn area.	N	Y	ATV	Engine One-Off's
80		A man rode his new 4-wheeled All-Terrain Vehicle (ATV) for less than 30 minutes when its radiator began overheating and hot liquid/steam spray shot out of the coolant bottle located near his left leg. This hot spray of coolant shot up out of a hole in the cap on the coolant bottle and through gaps in the ATV's frame work. He was wearing shorts. The victim suffered about a dozen burns along his leg as well as on his neck and chin from the hot coolant.	N	Y	ATV	Engine One-Off's
81		A family of five was riding on trails when their 4-wheeled UTV suddenly caught on fire. The 34 YOF wife and 18 month old child sustained burn injuries. The fire department extinguished the fire but the UTV was a total loss. Investigators determined that the fire originated within the engine compartment. The cause of the fire could not be determined due to the extent of the fire. There were five unrepaired recalls.	Y	Y	UTV	Unexplained
82		The console on a utility vehicle becomes excessively hot during extended operation of the unit. The consumer's 2-year-old granddaughter suffered a minor burn injury due to placing her bare foot onto the console while the unit was operating. No other heat-related injuries have occurred. The consumer also experienced a tip-over incident. No injuries occurred.	N	Y	UTV	Unexplained
83		A 66-year-old man and his wife were riding their utility vehicle with some friends from a Utility Vehicle Club when another rider caught up with them and shouted fire. Flames were observed around the cargo bed of the vehicle. The two occupants were able to escape the vehicle and extinguish the flames with sand. No injuries.	Y	N	UTV	Unexplained
84		On April 19, 2007, a 12-year old girl was driving her youth size ATV to her house. When she arrived home, she parked the vehicle outside on the front yard. She turned the ATV "off" and went inside the house. She saw a bright light coming from the window. The ATV was on fire. The family extinguished the flames. There were no injuries but the property damage was approximately \$2,700.00.	Y	N	ATV	Unexplained