

Thermite RS-1



THERMITE RS-1

Remote controlled fire-fighting robot



FEATURES

- › 24 hp diesel engine
- › 1,250 gpm nozzle
- › Stand off range of over 300 m
- › Track and vehicle cooling sprayers
- › Up to 20 hrs of runtime without refueling
- › High strength construction grade tracks and road wheels
- › Provides reconnaissance and situational awareness in high risk areas
- › Optional attachments: foam nozzle and scene lighting

THERMITE RS-1

Specifications

SYSTEM

TRACKS

Industrial-grade
belted rubber

POWER TRANSMISSION

Hydrostatic

TYPE

Independent
propulsion

WINCH

5,000 lb capacity

VIDEO SYSTEM

DTV (standard)
FLIR thermal (optional)

MONITOR

MAKE & MODEL

Elkhart Brass Cobra

MAX STREAM HORIZONTAL

+300 ft / 100 m

FLOW

1,250 gpm

MAX PSI/BARS

200 psi

MAX STREAM VERTICAL

+150 ft / 50 m

ENGINE

ENGINE DESCRIPTION

24 hp, diesel, 4 stroke, water cooled

MAKE & MODEL

Kohler KDW1003

DIMENSIONS

LENGTH

77.25 in

HEIGHT

64 in

WIDTH

44 in

**GROUND
CLEARANCE**

8 in

VEHICLE WEIGHT

+/- 1,600 lb

SYSTEM PERFORMANCE

MAX GRADE SLOPE

+50%

RANGE

300 m environment dependent

MAX SIDE SLOPE

35%

SPEED

6 mph

THERMITE RS-1

Standard Features

CHASSIS

- › Aluminum chassis
- › Chassis color: yellow
- › Base height 64 in
- › Base width 44 in
- › Base length 72 in
- › Hydrostatic drive
- › Diesel engine 24 hp liquid cooled Kohler
- › 12 volt DC 30 AMP alternator
- › Battery maintainer included
 - Input voltage 110 to 250 VAC 50/60 hz
- › Maximum speed 8 mph
- › Fuel tank 9 gal
- › Winch 5,000 lb
- › Rear hitch
- › Tool/cargo crib
- › Locking canopy

ELECTRONICS

- › Radio control - belly pack control with video screen
- › Video System
 - Tethered control included
 - Tethered maximum distance 100 ft
 - High definition standard (1080p) front
 - High definition standard (1080p) rear

MONITOR

- › Elkhart Brass 7,200 Cobra EXM Remote monitor nozzle 1,000-1,250 gpm

LIGHTING

- › Front
- › Rear
- › Emergency flasher, dual color

PLUMBING

- › Inlet line size 3" NPT (qty 2)
- › Aux take-off 2.5" NPT (qty 2)
- › Self-cooling spray system
- › Bumper sprayers

THERMITE RS-1

Variable and Add-on Features

CHASSIS COLOR

- ☐ Yellow* ☐ Red
☐ Other

Specify colors

VIDEO SYSTEM

- ☐ Front/rear rigid mounted camera*
☐ Additional monitor mounted camera
☐ Thermal camera - special licensing may be required

REMOTE SHUT OFF VALVE

- ☐ No* ☐ Yes

EMERGENCY FLASHERS

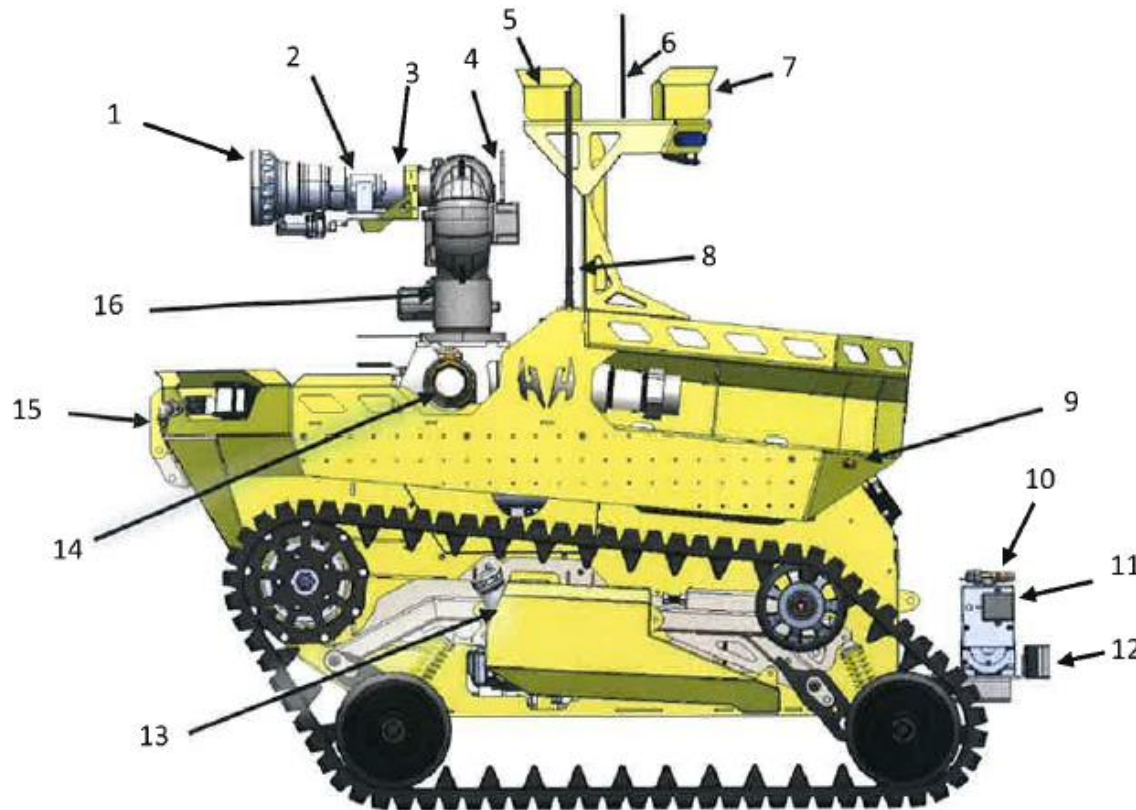
- > Two flashers* > Two additional flashers
☒ Dual color ☐ Dual color

Specify colors

Specify colors

THERMITE RS-1

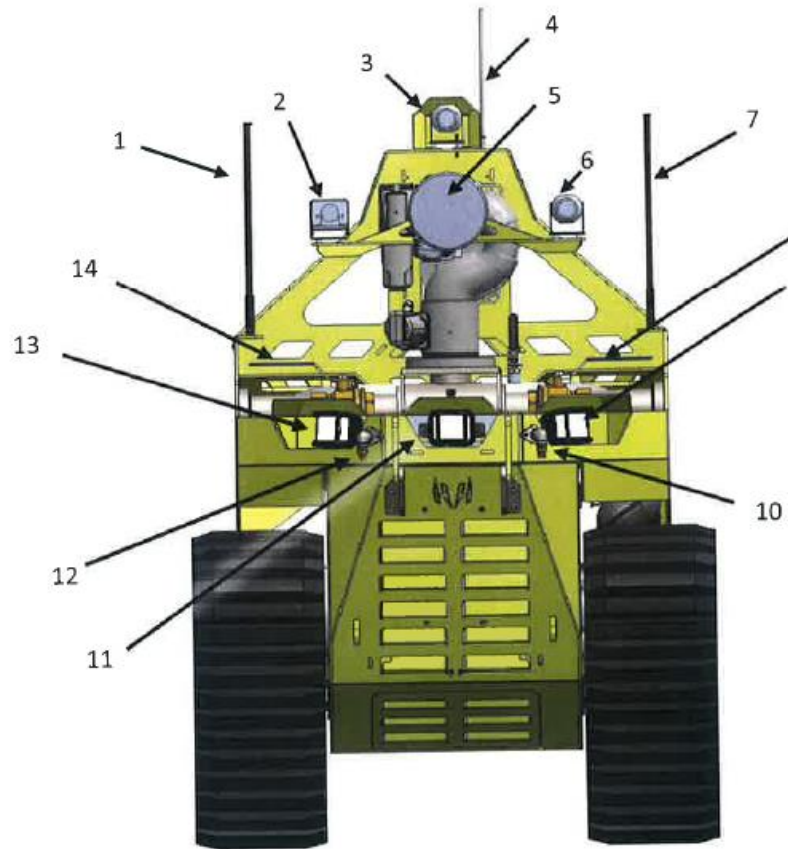
Left Side View



KEY	ITEM
1	Stream/Fog Nozzle
2	Optional Forward Camera Location
3	Stream Shaper
4	Monitor Control Antenna
5	Standard Forward Camera Location
6	Control Antenna
7	Standard Rear Camera Location
8	Video Transmit Antenna (Left)
9	Rear Vehicle Cooling Sprayer
10	Winch Wireless Controller
11	Winch Wireless receiver
12	Winch
13	Fuel Tank (Left)
14	Aux Take Off Water
15	Forward Vehicle Cooling Sprayer
16	Monitor

THERMITE RS-1

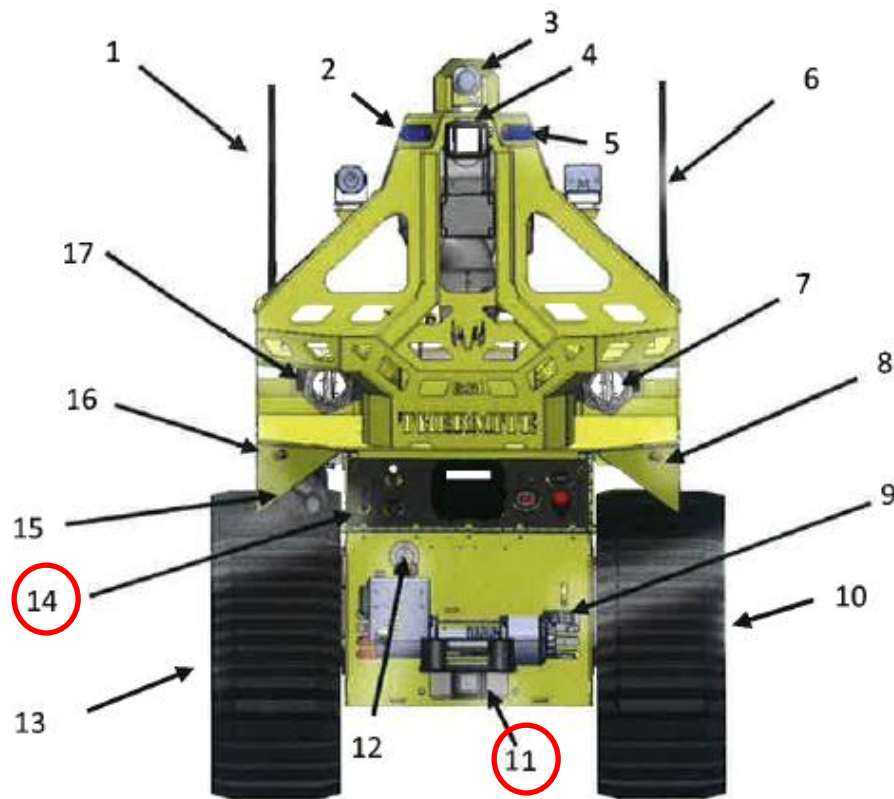
Front View



KEY	ITEM
1	Video Antenna (R)
2	Optional Forward Thermal Camera
3	Standard Forward Camera
4	Control Antenna
5	Nozzle
6	Optional Forward Camera Mount Location
7	Video Antenna (L)
8	Aux Take Off
9	Flood Light
10	Front Vehicle Cooling Sprayer
11	Spot light
12	Front Vehicle Cooling Sprayer
13	Flood Light
14	Aux Take Off

THERMITE RS-1

Rear View



KEY	ITEM
1	Video Antenna (L)
2	Blue Flasher
3	Standard Rear Facing Camera
4	Diffused Flood Light
5	Red Flasher
6	Video Antenna (R)
7	Water Inlet
8	Rear Vehicle Cooling Sprayer
9	Winch Power Connector
10	Track (R)
11	Winch
12	Wall Charging Port
13	Track (L)
14	Rear Control Panel
15	Exhaust Muffler
16	Rear Vehicle Cooling Sprayer
17	Water Inlet

THERMITE RS-1

Rear Control Panel



KEY	ITEM	DESCRIPTION
1	Status Light (Fault)	Red LED indicator illuminates when in a hydraulic fault state
2	Status Light (Good)	Green LED illuminates when hydraulic system is in an operational "Good" state
3	Master Power Switch	Lever-operated battery cutoff switch that will disconnect power for the battery circuit only
4	Engine Control Module	Digital displays of engine information and fuel level
5	Glow Plug Indicator	RED LED Illuminates when glow plugs are on
6	Run	Green LED illuminates when engine electrical system is "On"
7	System Hour Meter	Displays system operation hours (Not Engine Run Hours)
8	Emergency Stop (E-Stop)	When pressed, immediately disconnects electrical power to engine systems. Illuminates red when pressed and in active Emergency Stop State
9	Hydraulic Oil Temp	Digital Display of Hydraulic Oil Temperature
10	USB Charging Port	Connector ports for charging USB devices
11	Tether Port	Four pin connector for tethering remote OCU for tethered operations.

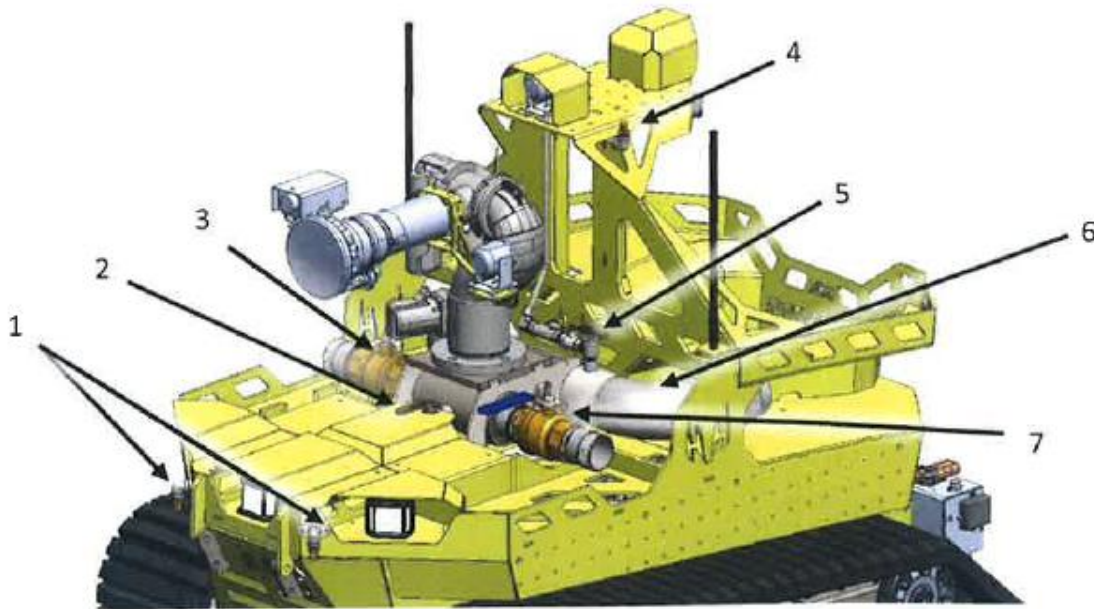
THERMITE RS-1

Standard Rear Winch



THERMITE RS-1

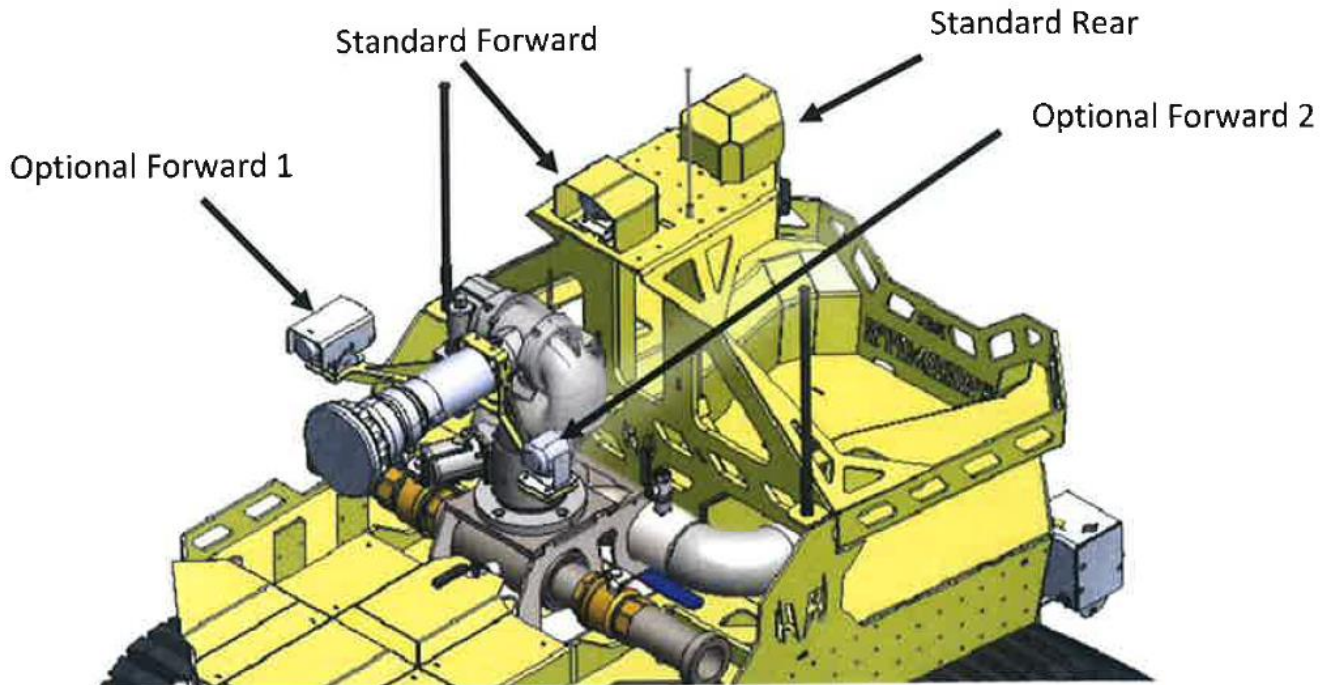
Cooling sprayers and Auxiliary water take-off



KEY	ITEM
1	Front Cooling Sprayer
2	Lower Vehicle Cooling Sprayer Valve
3	Aux Take Off (R)
4	Upper Cooling Sprayer (L)
5	Upper Vehicle Cooling Sprayer Valve
6	Water Manifold
7	Aux Take Off (L)

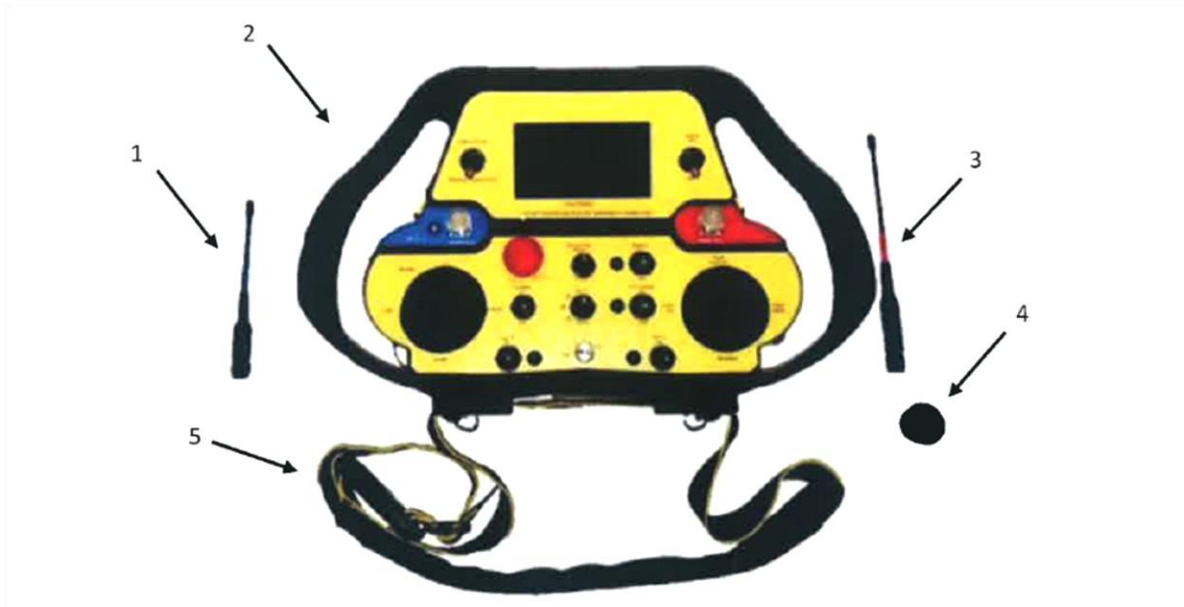
THERMITE RS-1

Standard and Add-on Camera/Thermal Imager locations



THERMITE RS-1

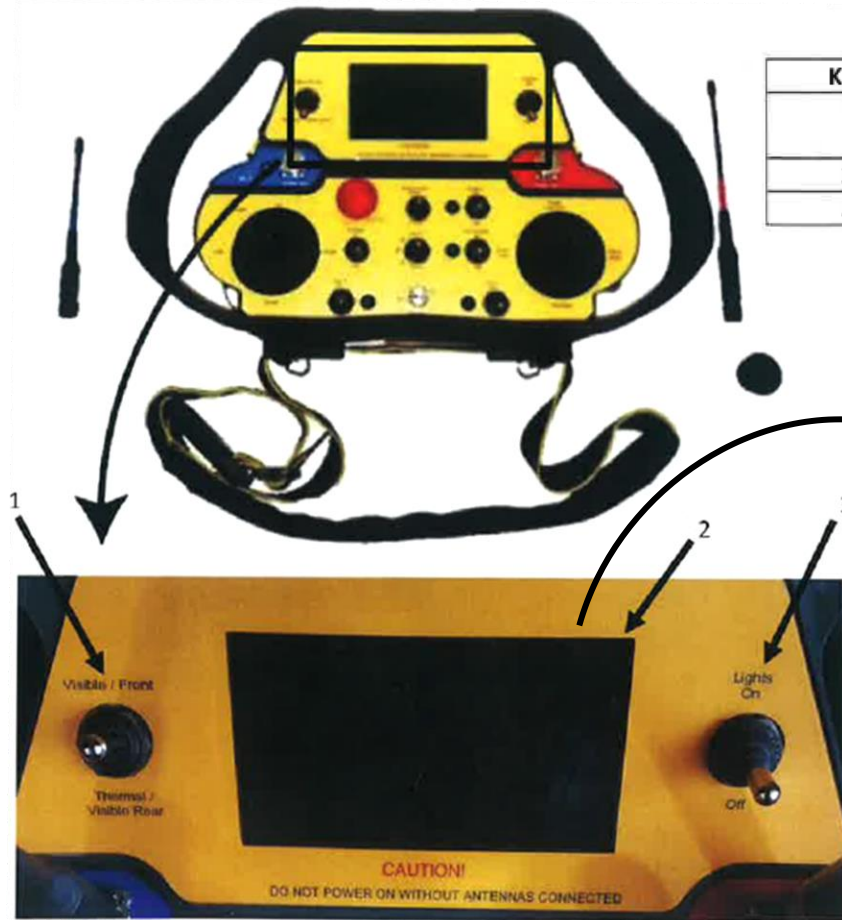
Operator Control Unit (OCU)



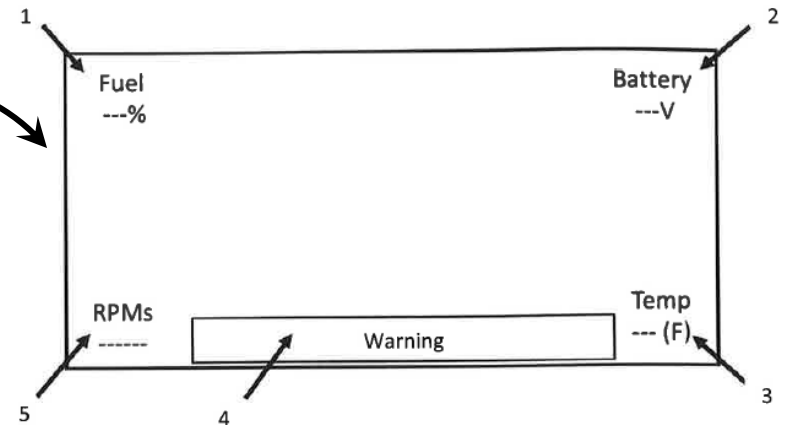
KEY	ITEM	DESCRIPTION
1	Antenna, Camera, Blue	Allows communication between cameras and OCU
2	Operator Control Unit (OCU)	Remote control device used to operate the Thermite
3	Antenna, Red	Allows communications between OCU and Thermite
4	Key	Powers ON the OCU
6	Adjustable Waist Strap	Supports OCU around the operator's waist

THERMITE RS-1

Operator Control Unit (OCU) - Display



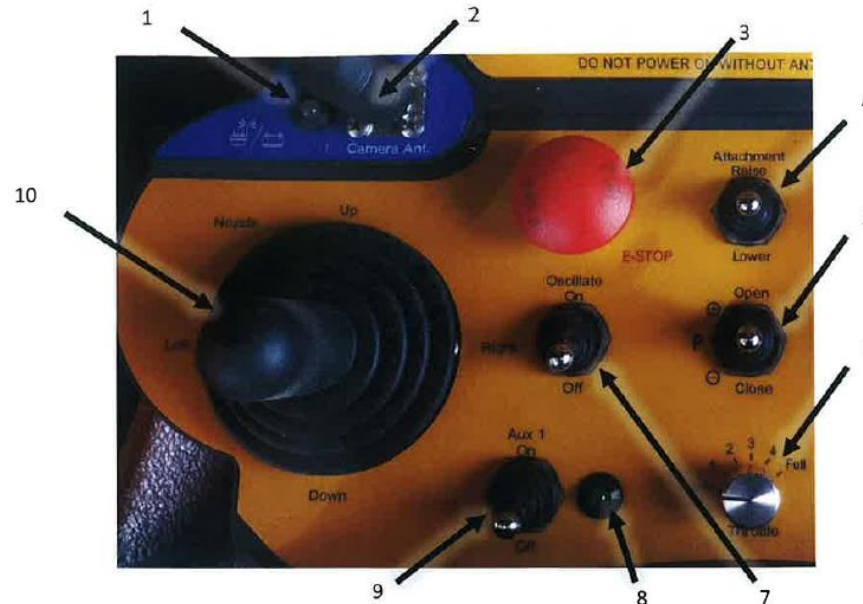
KEY	ITEM	DESCRIPTION
1	Camera Selector Switch	Changes display, Front or Thermal/Rear View Camera
2	LCD Display	Shows Video Feed of Selected Camera
3	Lights Switch	Turns Lights On/Off



KEY	ITEM
1	Fuel Level
2	Robot Battery Voltage
3	Engine Coolant Temp
4	Warning Display
5	Engine RPM

THERMITE RS-1

Operator Control Unit (OCU) – Left Face



KEY	ITEM	DESCRIPTION
1	Controller Status Indicator	Illuminates for operational status, low battery, and radio link
2	Blue Antenna Connector (Video)	Connector for blue banded video receiver antenna
3	Emergency Stop (E-Stop)	Shuts down power to the vehicle when in active E-Stop State
4	Attachment Switch	UNUSED
5	P Selector Switch (Unused)	UNUSED
6	Throttle Level Selector	Dial knob to increase/decrease engine RPM
7	Oscillate Switch	Activates oscillating motion of monitor
8	Aux 1 Indicator LED	Illuminates when AUX 1 is "On"
9	Aux 1 Switch	UNUSED
10	Nozzle Control	Directional input for monitor

THERMITE RS-1

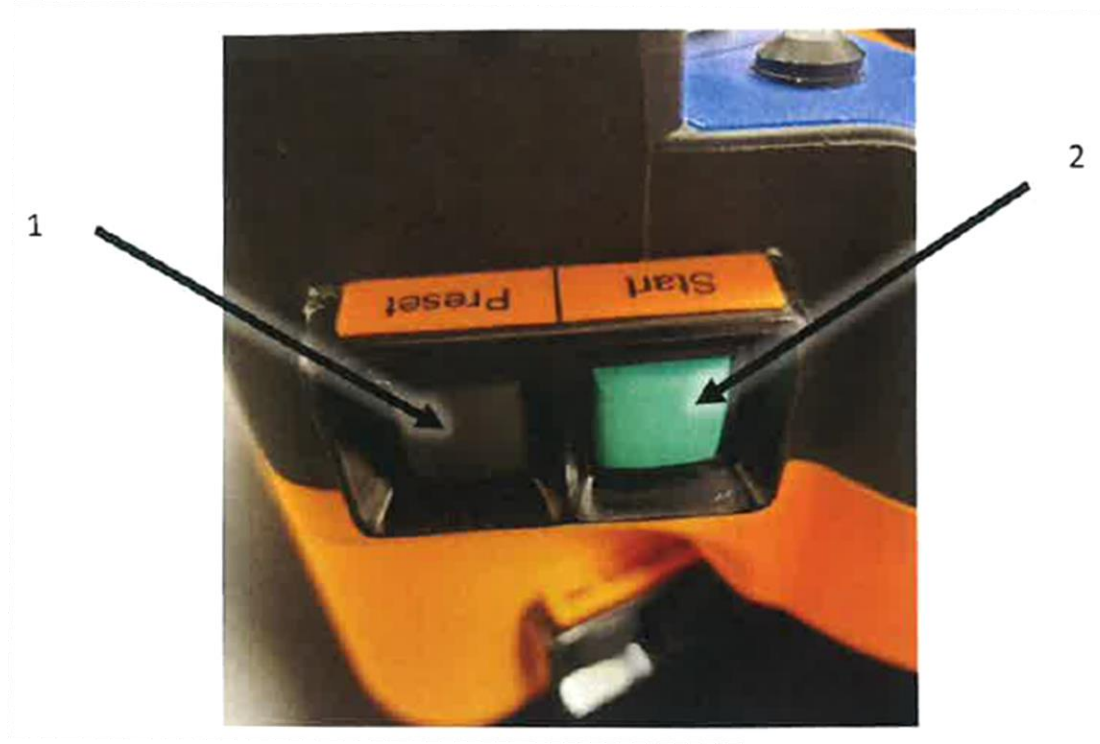
Operator Control Unit (OCU) – Right Face



KEY	ITEM	DESCRIPTION
1	Engine Switch On Indicator	Illuminates when engine switch is "On"
2	Engine On/Off Power Switch	Turns on/off electrical power to engine control system
3	Antenna Connector, Radio (Red)	Connection for Red banded vehicle control radio antenna
4	Directional Joystick	Controls system steering
5	Auxillary 2 Power On/Off Switch	UNUSED
6	Auxillary 2 On Indicator	Illuminates when Aux 2 is "On"
7	Low Range On/Off Selector Switch	Low Range gear selection provides a lower maximum speed limit
8	Low Range On Indicator	Illumionates when Low range is active

THERMITE RS-1

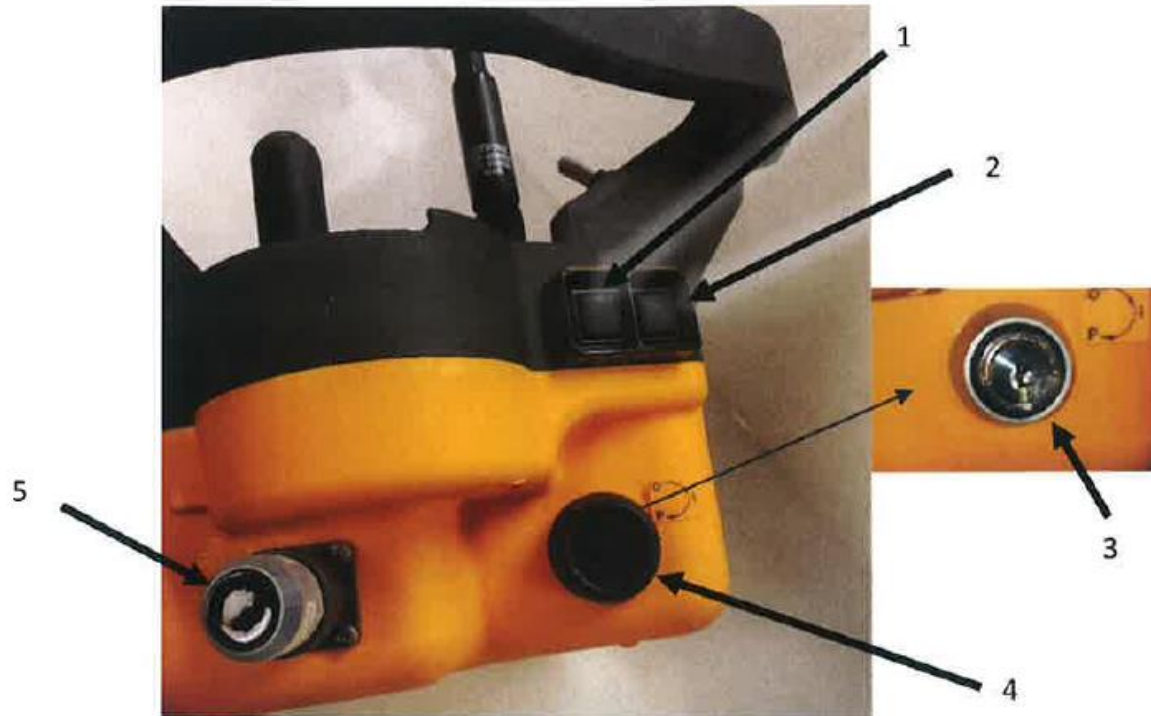
Operator Control Unit (OCU) – Left Side Control



KEY	ITEM	DESCRIPTION
1	Preset Button	Unused
2	Engine Start Button	Dual Function Switch used to link radio transmitter and receiver, and start engine

THERMITE RS-1

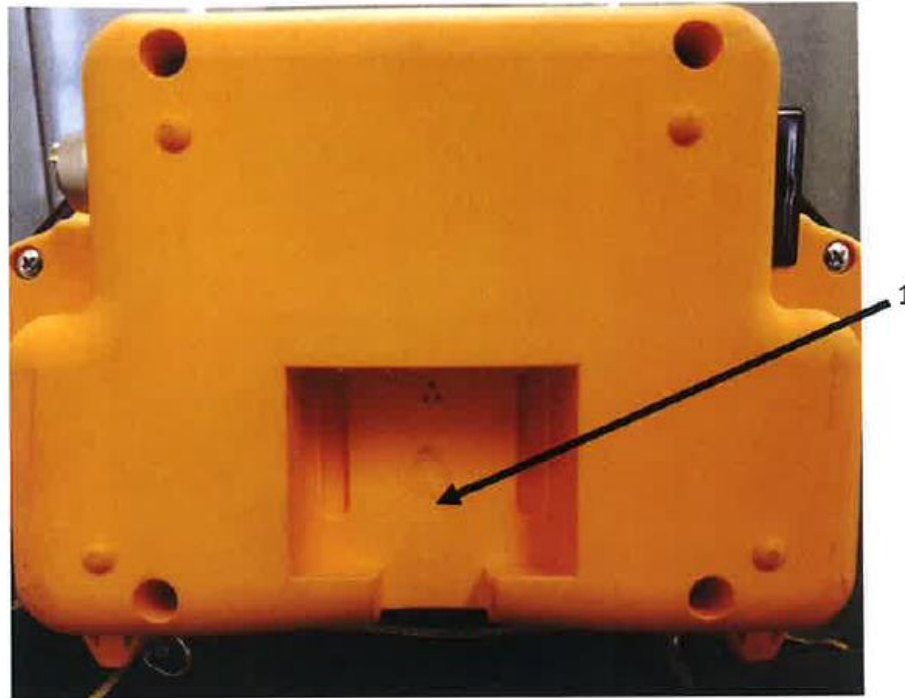
Operator Control Unit (OCU) – Right Side Controls



KEY	ITEM	DESCRIPTION
1	Stream	Nozzle Adjustment (Stream)
2	Fog	Nozzle Adjustment (Fog)
3	Key Receptical	Insertion point for OCU key
4	Key	Used to power on controller
5	Vehicle Receiver Key	Radio Frequency Key

THERMITE RS-1

Operator Control Unit (OCU) – Underside



KEY	ITEM	DESCRIPTION
1	Controller Battery Slot	Housing for OCU battery

THERMITE RS-1

Singapore SCDF Trials



THERMITE RS-1

Singapore SCDF Trials



THERMITE RS-1

Singapore SCDF Trials



THERMITE RS-1

Singapore SCDF Trials



THERMITE RS-1

Singapore SCDF Trials



Thank You

(Question Time)

