



INDUSTRIAL · CS-520

FIND THE EDGE. MARK IT. MEASURE IT.

A small moulded surface craft — the information and marking layer of a spill response.

FIND · MARK · MEASURE · TREAT — SHORE-ENABLED

PATENT PENDING

RADIO AND GNSS PERMITTED — CIVIL WORK MACHINE

~15 KG

DISPLACEMENT — A TWO-PERSON
LIFT AT THE WATER'S EDGE

~1.2 M

WATERLINE LENGTH — TRUCK-
DEPLOYABLE, NO CRANE

3 FITS

ONE PAYLOAD BAY — BUOYS,
SENSING, SEALED DISPERSANT

1

SHARED HULL & STATION-KEEPING
MODULE ACROSS THE WATER TRIO

OVERVIEW

THE FIRST HOUR OF A SPILL IS AN INFORMATION PROBLEM.

Part of the **4-system Industrial line** — shares its envelope and doctrine with Recovery, Dredger, Seeder.

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When oil reaches water, the response that matters most in the first hours is not collection — it is knowing exactly where the slick is, where its edge runs, how thick it sits, and where the worst of it is heading.

Skimmer is a small, two-person-liftable moulded surface craft built for exactly that job. Launched from a truck, a dock or a workboat, it runs the slick edge on its own station-keeping, marks the boundary with high-visibility moulded buoys it leaves in the water, measures thickness along its track, and streams the growing map to shore over commercial radio and GNSS — the civil line's standing advantage, used openly. A team of craft turns a rumour of a slick into a georeferenced perimeter a response commander can act on.

We are precise about the name. Skimmer does not mechanically recover oil — bulk recovery belongs to boom-and-skimmer vessels two orders of magnitude larger, and within our own fleet to Recovery CS-580, its pairing platform. Skimmer is deliberately the finding-and-marking layer: the craft that makes every one of those bigger assets arrive at the right place, first time. Where a regulator has approved dispersant for the incident, a sealed cartridge variant can spot-treat the worst patches — and only on a positive command from shore.

THE DIVISION OF LABOUR

SKIMMER FINDS AND MEASURES. RECOVERY COLLECTS.

The water trio splits a spill response the way a fire crew splits a fireground: Skimmer CS-520 is reconnaissance and marking, Recovery CS-580 is bulk collection, Dredger CS-570 works the sediment. One shared hull and station-keeping module underneath all three — three jobs, one parts bin.

HOW IT WORKS

MECHANISM

FIND. MARK. MEASURE. TREAT — SHORE-ENABLED.

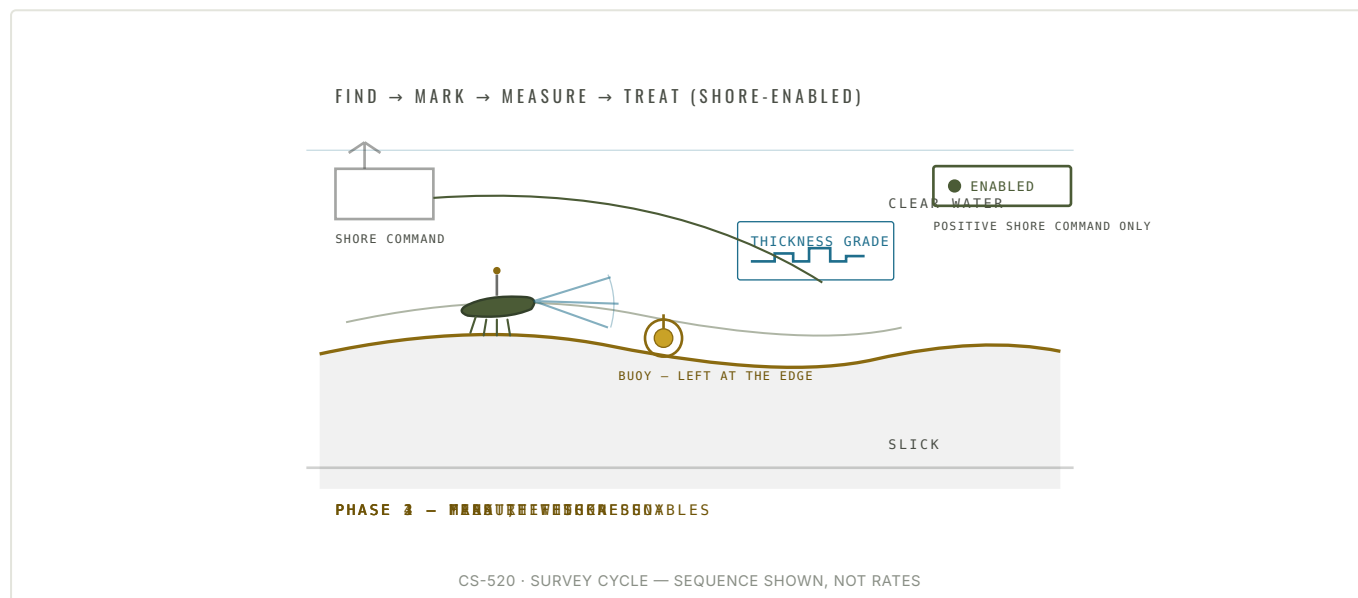
One loop, four phases: find the edge, mark it, measure it — and treat only where shore says so. The craft repeats the cycle until the perimeter is closed or the pack runs down.

FIND. A bow sensor sweeps a swath ahead of the craft and discriminates oil from water; the autopilot turns along the boundary and holds it, station-keeping against the current the way the shared hull module was designed to.

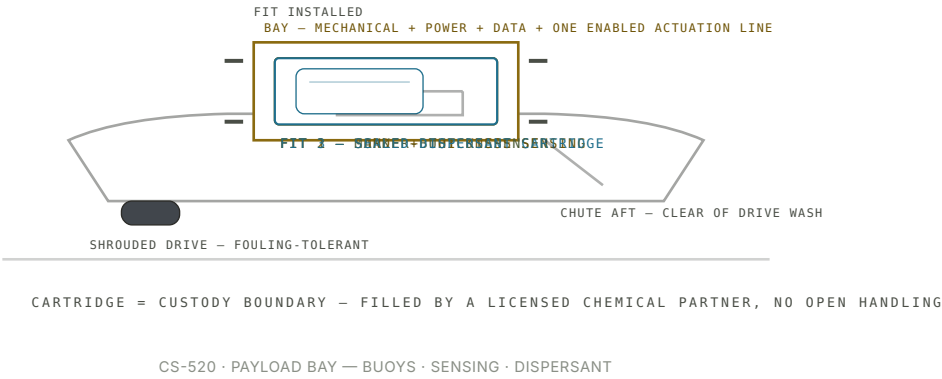
MARK. At intervals along the edge, the aft chute releases a moulded high-visibility buoy that stays behind as a physical fix — visible to crewed vessels and aircraft with no screen in the loop. Every drop is logged with position.

MEASURE. Thickness sensing along the track grades the slick, so the map shows not just where the oil is but where it is worst — the difference between a perimeter and a plan.

TREAT. With the dispersant fit installed and a regulator's approval on the incident, shore command can positively enable spot treatment inside a geofence. Release is logged, litre by litre. The craft never decides this on its own — by design, there is no autonomous path to the spray bar.



ONE BAY · THREE FITS — A NEW PAYLOAD IS A TOOLING CHANGE



SPECIFICATIONS

CAPABILITIES & SPECIFICATIONS

SKIMMER CS-520

DIMENSIONS & MASS		PERFORMANCE	
Displacement / mass	~15 kg (0.015 m ³) — a two-person lift	Survey speed	~1.25 m/s (~2.4 kn)
Waterline length	~1.2 m	Station-keeping	Holds station against ~0.5 m/s adverse current
Hull form	Self-righting moulded monohull	Survey swath	~5 m — set by the edge sensor
Configuration	Small uncrewed surface craft — launched from a truck, a dock or a workboat	Endurance	~10–12 h calm water, at ~13–15 W total draw
		Operating water	Nearshore, harbour and inland water — a sheltered-water tool by design

DRIVE & CONTROL		PAYLOAD & TOOLS	
Drive	Single electric drive — shrouded, fouling-tolerant	Payload bay	One common bay — mechanical + power + data + one positively-enabled actuation line
Energy	200 Wh-class sealed pack, swappable at the shoreline	Fit 1 — marking	Marker-buoy dispenser — moulded high-visibility consumables, released on command, every drop logged
Station-keeping module	Shared shallow-draft hull & station-keeping module — common across the water trio	Fit 2 — sensing	Water-quality sonde + oil-thickness measurement
Communications	Commercial radio + GNSS — permitted and standard on the civil line; telemetry and release logging to shore	Fit 3 — treatment	~3 L sealed dispersant cartridge — geofenced, logged, shore-enabled only
Visibility	High-visibility finish, all-round light, radar-reflective mast — a work craft that wants to be seen		

MATERIALS & CONSTRUCTION		RECOVERY & TURNAROUND	
Hull	Recycled-PET glass-fibre compound (rPET-GF), moulded in-house	Turnaround	Two-person lift-out, pressure-wash decontamination, pack swap, buoy restock
Buoys	Moulded in-house — the consumable the craft exists to spend	Sensor windows	Sacrificial — swapped out after oiled sorties
Cartridge	Moulded in-house, filled by a licensed chemical partner, swapped as a sealed unit	Buoy retrieval	Every buoy position logged for retrieval — nothing left adrift
Tooling	Hull, deck, trays and buoys moulded on Canadian-cut tooling		

COMPLIANCE	
Patent status	Patent pending
Line classification	Civil work platform — surface Industrial line; radio and GNSS permitted, used openly
Mission boundary	Finds, marks and measures — does not mechanically recover oil; bulk collection is Recovery CS-580 scope
Dispersant governance	Regulator-approved incidents only — geofenced, logged, enabled solely by positive shore command; never autonomous
Energetic content	None — no warhead, no fuze, no terminal-effect content of any kind

NO HEADLINE COVERAGE OR TREATED-AREA FIGURE IS PUBLISHED: COVERAGE PER CRAFT IS SWATH × SPEED × TIME-ON-EDGE, AND TREATED AREA PER CARTRIDGE IS SET BY SLICK THICKNESS AND THE DISPERSANT-TO-OIL RATIO THE REGULATOR APPROVES FOR THE INCIDENT. A SINGLE NUMBER WITHOUT THOSE VARIABLES ATTACHED IS MEANINGLESS — SO, AS WITH THE SPOT-SPRAY PLATFORMS, THE VARIABLES ARE STATED AND THE NUMBER IS NOT.

THE TRADES, STATED

A WORK MACHINE FROM THE SAME SHOP AS THE FLEET.

The Industrial line is Canadian Shield's civil line: the same sovereign manufacturing stack that moulds the defence fleet, pointed at work — seeding, spraying, dredging, spill response.

Skimmer is that doctrine on the water. Hull, deck, trays and buoys are moulded in-house on Canadian-cut tooling; the buoys — the consumable the platform spends — are among the purest expressions of our recycled-material discipline in the whole fleet. The shallow-draft hull and station-keeping module underneath it is shared with Recovery CS-580 and Dredger CS-570, so the water trio rides one parts bin, one tooling family and one sustainment stream. Drawn once, used three times: that is the economics that lets a municipality or a port authority afford a team of these instead of one of something exquisite.

And because this is the civil line, the craft talks. Commercial radio and GNSS are permitted up here and used openly — live telemetry, a shared map, positive shore control of anything that matters. The defence fleet's no-radio discipline exists for the jammed battlefield; a harbour spill response needs the opposite, and gets it.

DEPLOYMENT

A HARBOUR MORNING, RUN PROPERLY.

A fuel barge has put oil in the water overnight. The response's first question is not "how do we collect it" — it is "where is it, and where will it be at noon." This is Skimmer's hour — illustrative of how the craft works a nearshore, harbour or river-reach incident, not an incident record.

01 · ARRIVE

OFF THE TRUCK, INTO THE WATER

A crew of two arrives at the boat launch with craft racked in the pickup bed — charged packs, buoy stacks, and the sensing fits already latched. Two people lift each craft to the water: no crane, no trailer queue, no ramp negotiation. Swappable sealed packs keep the team on the water instead of waiting on a charger, and the shore station is up in minutes — commercial radio link, shared map, enable authority.

02 · WORK

THE TEAM CLOSES THE PERIMETER

A team of craft fans out to the reported slick, finds the edge and starts walking it — each holding station against the current, each streaming its track. The edge hardens, buoy after moulded buoy left bobbing at the boundary with every drop logged; thickness measurements grade the map to show where the oil is worst. The perimeter streams to the command GIS — and if dispersant is approved for the incident, shore enables spot treatment inside the geofence. The craft never self-authorizes.

03 · RECOVER

EVERYTHING COMES HOME

Recovery-layer vessels work the marked, graded slick. The Skimmer team lifts out, washes down and reconciles the count: every oiled sortie ends at the pressure-wash fittings, sacrificial sensor windows swap out, packs swap and buoys restock. Buoy positions are logged for retrieval — nothing is left adrift, because a response tool must never become its own pollution incident.

THE CIVIL RULING

NOT A WEAPON. NOT A VARIANT OF ONE. A TOOL.

Skimmer carries buoys, sensors and — only where approved — sealed dispersant. No warhead, no fuze, no energetic or terminal-effect content of any kind, ever; the family shorthand is "carriers, not munitions," and on the civil line the carrier carries work. It is high-visibility by doctrine: a response craft among crewed vessels is built to be seen, not to hide.

THE FAMILY

RELATED SYSTEMS

CS-580 · WATER TRIO RECOVERY The pairing platform — bulk collection of the slick Skimmer has found, marked and graded.	CS-570 · WATER TRIO DREDGER The third of the trio — works the sediment on the same shared hull and station-keeping module.	CS-510 · LINE ANCHOR SEEDER The Industrial line's anchor — the same civil-line rules: radio and GNSS permitted, used openly.
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Skimmer CS-520 · patent pending · a civil work platform on Canadian Shield's surface Industrial line, where commercial radio and GNSS are permitted and used openly. Skimmer finds, marks and measures a slick — it does not mechanically recover oil; bulk collection belongs to the recovery layer and, within the fleet, to Recovery CS-580. It carries buoys, sensors and, only where a regulator has approved it, sealed dispersant released solely on positive shore command — no warhead, no fuze, no energetic or terminal-effect content of any kind, ever. Carriers, not munitions.



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01

REQUEST A TECHNICAL EXCHANGE

A working session with engineering, not sales — bring your engagement problem, we bring the mechanism.

02

REQUEST THE INDUSTRIAL FAMILY DATA PACK

Drawings, tolerances and test basis for Skimmer and its siblings, gated behind export screening.

03

DISCUSS A TRIAL QUANTITY

Tell us end-user, jurisdiction, quantity band and timeline — we respond against your program, not a price list.

SALES

sales@cdnshield.ca

GENERAL

info@cdnshield.ca

WEB

cdnshield.ca

Direct lines, named points of contact and facility details are shared with qualified programs following screening — not withheld, sequenced.

Canadian Shield is a defence and industrial drone company, backed by SIG: four-domain uncrewed systems built for jammed, GPS-denied environments — no-radio by design, manufactured for cost and salvo depth.

Skimmer CS-520

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