



Document Control Number 116-All-General-103	Challenger Vessel Specifications	
Revision 2009-10-02	Document Owner Position Party Manager	



VESSEL SPECIFICATIONS


Ship's name	Fairfield Challenger
Owner	Fairfield Industries
Year re-built	2009 (Fairfield Industries)
Year re-built	1996
Year built / at	1984 North American Shipyard / Larose, Louisiana
Hull Number	129
Previous name	C-Explorer
Type	Seismic Research Vessel

Document Control Number 116-All-General-103	Challenger Vessel Specifications	
Revision 2009-10-02	Document Owner Position Party Manager	

Official number	670533
IMO no.	8428571
Call sign	WDC6422
Flag	USA
Port of registry	Houston, Texas USA
Classification society	ABS / SOLAS
Class assigned	A1, AMS
Class Number	8402795
Length overall /length between perpendiculars	63.1 meters
Length between perpendiculars	14 meters
Breadth (molded)	14 meters
Depth (molded)	4.9 meters
Draft (Max)	4.8 meters
Gross Tonnage (US regulatory)	299 US
Gross Tonnage (International)	2202 ITC
Net Tonnage (US regulatory)	203 US
Net Tonnage (International)	661 ITC
Helideck rating	SK 76 C+
Speed Max, Calm sea state	9 Knots
Speed Economy, Calm sea state	5 Knots
Daily Consumption (Transit)	2500 US gallons
Daily Consumption (Working)	3500 US gallons
Transit Endurance	75
Operational Endurance	60 Days
Last dry docking	currently in dry dock 12-17-2008

Radio Comm. & Navigation Aids


GMDSS (3)	(2) Furuno FM8500 (1) Furuno F5-1562
VHF DCS (2)	Furuno VHF-FM 8500 marine radios. DSC capable. Serial Numbers 2597-3747 & 2597-9302.
Inmarsat Mini C	Furuno #15 s/n 3561-4520
GMDSS Survival Radio (4)	Product #2727
VHF(3)	Standard Horizon handheld VHF's. Model Number Submersible HX370S. Serial Numbers 41060161 / 41060175 / 41060166
Radar	Furuno FR-2010 Radar. Type MU 201 CR. Serial Number 1445. ARPA & AIS Integrated.
Radar	Furuno FR-1510 MK 3 Radar. Type RDP-119. Serial Number 3366-1708.
Email (Master)	Challenger_capt@fairfield.com
Email (Party Manager)	Challenger_pm@fairfield.com
Phone Number V-Sat (Master & Instrument Rm)	832-461-8582

Document Control Number 116-All-General-103	Challenger Vessel Specifications	
Revision 2009-10-02	Document Owner Position Party Manager	


Phone Number V-Sat (Party Manager)	337-761-8802
Autopilot	Robertson STS 500 Simrad, advanced auto pilot.
Autopilot	Robertson AP9 MK-III autopilot with Robertson RI-9 rudder angle indicator and navigation computer.
Necode Encoder/Decoder	Model Number 322 ARX.
Interface box	N/A
Speed Log	N/A
Sound Power Phone	8 Hose/Mcann
V-Sat	Ku Band
Weather Fax	N/A
Echo Sounder	Furuno FCV-292 Color Video Sounder. Model FCU-667. Serial Number 8020-0203.
Navtex	JRC Navtex Receiver. Model Number NCR-333. Serial Number GD6-7108. FCC ID CKENCR-333.
GPS	Furuno GPS. Model GP-31. Serial Number 3443-2141
GPS	Furuno GPS. Model GP-90. Serial Number 4400-0386.
Automatic Identification System (AIS)	Furuno FA-150 # 010790
PA System	
Magnetic compass	Ritchie Magnetic Compass with compensating balls.
Gyro Compass	Sperry Gyro Compass SR-220 with repeater. Serial Number 10264.
Single Side Radio	Furuno SSB Transceiver. Model FS-2570. Serial Number 001072
Aircraft radios	
Aircraft radios	
Closed Circuit TV	CS Lilin Video Switcher. Model Number PIH 200-8.
Cellular Phone (Offshore)	337-504-0808
Cellular Phone (Onshore)	337-319-1010
Satellite Phone Iridium	

Lifesaving and Firefighting Equipment


Life Raft # 1	25 man
Life Raft # 2	25 man
Life Raft # 3	25 man
Life Raft # 4	25 man
Life Raft # 5	20 man
Life Raft Gun Deck Aft.	6 man
Fire Zone Alarm System	Notifier Fire Alarm System / Model 640/ Smoke & Heat
24 - Rocket Parachute Distress Flares	
Line Throwing Appliance	Speed line 250 Rockets

Document Control Number 116-All-General-103	Challenger Vessel Specifications	
Revision 2009-10-02	Document Owner Position Party Manager	


Fast Rescue lifeboat and Davit	Rigid Hull Inflatable Boat on Davit. FRB-600. Fitted with a 90 HP outboard engine. Model Yanaha 4-stroke .
Ring Buoys (16)	14 with lights, 2 with smoke signal device and lights
Pilot Ladder	N/A
Jacobs Ladders (2)	20ft each
Daylight Signalling Lamp (1)	Francias Search light #c06740
Ships Security Alarm System (SSAS)	Furuno ssas # 014760 / Reset # 014860
Emergency escape breathing devices (7)	Self Contained Breating Apparatuses.
Epirb 1	EPIRB. ACR SatFind-406. Model RLB-32. Serial Number 16168. VIN ADCD-023CA141001.
SARTS (2)	Search and rescue transponders (SART's). Model Number ACRSA Tellusart MK-II. Serial Numbers 00448 & 01234.
Extinguishers (23)	10# Dry Chem
Extinguishers (2)	10# CO2
Extinguishers (17)	15# CO2
Extinguishers (5)	20# Dry Chem
Extinguishers (1)	2 1/2# Dry Chem
Extinguishers (1)	5# CO2
Extinguishers (2)	5# Dry Chem
Extinguishers (1)	20# CO2
Helideck foam system	Chemical Guard-Fitted Port and Stbd forward of Helideck.
Fire alarm system	Smoke & Heat detectors fitted throughout vessel
Survival Suits	N/A
Lifejackets (128)	128 SOLAS
SCBA's (4)	4 sets with 10 spare bottles
Fire Suites (4)	4 Complet
Fire Axes	10
Oil Spill Kits	4
Fixed Fire Fighting Systems	
Emergency Generator Room	Shared engine room system. (18) 100# Fixed CO2
Paint Locker	35# CO2 Fixed
Galley	Wet Chem Hood System
Engine Room	Shared engine room system. (18) 100# Fixed CO2
Compressor Room	Shared engine room system. (18) 100# Fixed CO2
Accommodation	
Total	51
Crew accommodation	18
Seismic accommodation	25/ 4 MMO / 4 Clients
Offices (One office can be given to Charterer)	2 (1 PM office & 1 Capt. Office)
Hospital Room	1

Document Control Number 116-All-General-103	Challenger Vessel Specifications	
Revision 2009-10-02	Document Owner Position Party Manager	


Mess room	Accommodation for 21
TV Lounge	Accommodation for 12
MACHINERY	
Main Engines	
NO.	2
TYPE	Caterpillar Model 3516 / Total HP 3000
SERIAL NUMBERS	Port Ser# 29201098/AR2 W 8864 Stbd Ser# 29200763
BHP	1748 @ 1600 RPM
Starters	Air starter
CLUTCH/ CPP	Caterpillar MG-7271 marine gears with 5.55:1 reduction
SAFETY DEVICES	Engines fitted with a full alarm protection system and air-pneumatic engine enunciator controls in engine room and pilothouse. All internal combustion engines are supported by various fuel, lubricating oil and water circulating pumps.
CONTROL & MONITORING	
Propellers (2)	Kahlenbery 4 blade 92" X 67" propellers. Thrust enhanced by two Kort nozzles.
Bow Thrusters	
NO.	1
TYPE	One Caterpillar 3408 diesel engine driving a Twin Disc MG-514-C marine gear with a 1.5:1 reduction ratio. Bow thruster diesel engine fitted with a Caterpillar PTO that provides rotational power for auxillary fire pump.
SERIAL NUMBER	99U04419
BHP	Rated at 400 HP @ 1800 rpm. Electric over air start, 120 VAC.
Propeller	
SAFETY DEVICES	Engines fitted with a full alarm protection system and air-pneumatic engine enunciator controls in engine room and pilothouse. All internal combustion engines are supported by various fuel, lubricating oil and water circulating pumps.
CONTROL & MONITORING	
Main Generators	
NO.	2
TYPE	Caterpillare 3508 diesel engine driving Kato 560-KW
SERIAL NUMBERS	Port Ser# 23200709 Stbd Ser# 23200710
Voltage	480 V A/C synchronous.
KW	560 KW @ 1800 RPM.
SAFETY DEVICES	Engines fitted with a full alarm protection system and air-pneumatic engine enunciator controls in engine room and pilothouse. All internal combustion engines are supported by various fuel, lubricating oil and water circulating pumps.

Document Control Number 116-All-General-103	Challenger Vessel Specifications	
Revision 2009-10-02	Document Owner Position Party Manager	

Starters	Air started and grid cooled.
Emergency Generators	
NO.	1
TYPE	Caterpillar Model C18, 806 HP
SERIAL NUMBER	Serial Number SNJ 01291
Voltage	480 V A/C 60 Hz 3 phase
KW	550 KW @ 1800 RPM
SAFETY DEVICES	Engines fitted with a full alarm protection system and air-pneumatic engine enunciator controls in engine room and pilothouse. All internal combustion engines are supported by various fuel, lubricating oil and water circulating pumps.
Ships Air Compressors	
Number of units	2
Type	Quincy Model Number 350. Electric Motor(s) are General Electric Model Number 5K215BL2050. Frame Number 215T. 10 HP. 1745 RPM
CAPACITY	60 gallon cylindrical horizontally mounted cylindrical air receivers with receivers and safety valves.
SAFETY DEVICES	
Deck air Compressors	
Number of units	None on board
CAPACITY	SHIPS AIR
SAFETY DEVICES	
Switchboard	
DISTRIBUTION	Point Eight
MAIN VOLTAGE	560kw / 480 vac / 3 phase
AUX. VOLTAGE	110 V A/C 60 HZ / 3 phase
PARALLEL LOAD	Generators do not run in parallel
REVERSE POWER	
Steering Gear	
Number of units	2
Make	Engine Motor Inc.
Reservoir	100 gals
Vessel Blackout	
COMMUNICATIONS	Sound powered phone / UPS powered intership phone
EMERG. LIGHTING	12 Volt powered battle lanterns
ALARMS	12 / 24 Volt general alarm
Sludge Pump	
TYPE	Electric motor driven bilge/slop oil pump. Viking pump Model Number HL4195 Motor by Baldor. Frame 184T. 5 HP. Cat M3615T.
GS Pumps (bilge/ball/fire)	

Document Control Number 116-All-General-103	Challenger Vessel Specifications	
Revision 2009-10-02	Document Owner Position Party Manager	

TYPE	15 HP electric motor driven 4" X 3" Peabody Barnes bilge pump #2. Motor US Electric, Model Number 4030HCU. Frame 254T. ID # F7853-01-818.
TYPE	15 HP electric motor driven 3"X 3" Peabody Barnes bilge pump #1. Motor 208/230/460 VAC 3 phase, 60 Hz, 3500 RPM. Serial Number 0837890-1101.
Emergency Fire Pump	
TYPE	Harrisburg. Centrifugal Pump Model 546. Serial Number P7607670
Fire Monitors	
FiFi PUMP	
TYPE	
F.O. Transfer Pump	
TYPE	15 HP electric motor driven 3" X 3" Peabody Barnes fuel transfer pump with Veeder-Root gallon meter. Veeder Root Form Number 789001-001. Serial Number FR189191. Pump Model 25CL. Motor General Electric Frame # S215TCZ. 460 VAC. 3 phase. 60 Hz. 3500 RPM.
F.W. Transfer Pump	
TYPE	Jacuzzi Jet Pump
F.O. Separator	
TYPE	MAB 104B
CAPACITY	Viscosity 65 @ 100 deg F. Throughput is 1 imp gal per hr.
Oily Water Separator	
TYPE	Alfa-Laval fuel oil purifier. Type MAB-103B.24. Gear pump part number 529209-82. Motor: 1 HP. Frame NL143TC5592083, Class F (35). 208/230 VAC. 60 Hz, 3 PH, 4.2 A, 1720 RPM.
CAPACITY	
Sewage Plant	
ORCA 2A	
Type	Sewage pump with piping system to holding tank. Motor Baldor. 5 HP. Frame 184T. Cat M3615T. Serial Number F0504223519. Pump Model P013LA-8D. Serial Number T1124785.
CAPACITY	36 person
Water Maker	
Number of Units	2
TYPE	Alfa Laval desalination unit (fresh water maker). Model JWP-16-C40. Unit # N5780 (year 1993).
CAPACITY	1650 GPD
TYPE	Green Marine fresh water maker. Model R/O 4000.

Document Control Number 116-All-General-103	Challenger Vessel Specifications	
Revision 2009-10-02	Document Owner Position Party Manager	

CAPACITY	4000 GPD
Deck Crane	Coastal Hydraulics Cranes Inc.
Rated Capacity	5000 lbs
Load Test	10,000 lbs


Trash Compactor	N/A
TYPE	
Volume	
Windless	HBL Industries
TYPE	Mod #ODW-1.25H-1 Serial #521002
Chain	1 1/2" x 2" x 5"
Length	Port 6 shots Stbd. 10 shots
Anchor's (2)	2

Capacities

Fuel Type	#2 Diesel
Fuel	196,000 gallons
Potable Water	72,510 gallons
Ballast water	123,950 gallons
Lube Oil	12,152 gallons , T15W40
Hydraulic Fluid	1,026 gallons /HYD 68 Symthetic
T-40 oil / DSL 100	442 gallons each
Refrigerator / Freezer	2 freezer @ 3hp / 2 cooler @ 2hp
Sewage Tank Capacity	8032 gallons

Seismic Equipment

Seismic Compressor Systems	
Number of units	2
Drive engines	Caterpillar DI-3516
Type of Compressors	Joy 1800 CFM 5
Cubic Feet Per Minute Per Unit	1800 cu
Total (CFM) both units	3600 cu
Seismic Source	
Gun QC System	NA
Gun Positioning	NA
Gun Positioning	NA
Source Controller	RTS Big Shot 72 channels
Active Strings	Client Request
Standard array size	Client Request
Gun umbilical reel	6 / Odom's
Bolt Air Guns	1900 / 1500

Document Control Number 116-All-General-103	Challenger Vessel Specifications	
Revision 2009-10-02	Document Owner Position Party Manager	

Bolt Air Guns	NA
Bolt Air Gun Solenoids	NA
Gun Flootation system	Sausage type
Paravanes	
Seismic Navigation Systems	
Integrated Navigation System	Provided by Client
Primary Navigation Input	Provided by Client
Secondary Navigation Input	Provided by Client
Third Navigation Input	Stand alone GPS
P294 logging of raw GPS data	
Primary Gyro Input	Meridian
Secondary Gyro Input	GPS Vector
Echosounder	Odom CV2 12/200 KHz
WaterSpeed	None
Gun Positioning	Laser
Multi-Vessel Links	None
Multi-Vessel Links	None
Quality Control	None
Real-time Binning	None
Processing	None