

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Lifting Frame

with type designation(s)
FRAME ASSEMBLIES AND LIFTING STRUCTURE DESIGNS

Issued to

Solar Turbines Incorporated
San Diego CA, United States

is found to comply with
Standard for Certification 2.22 Lifting Appliances, 2013

Application :

Structure Frames are designed to handle gas turbine engines and compressors with their related parts for onshore and offshore installation where the dynamic factor does not exceed 1.0g, applied in addition to the static weight of the package.

This Certificate is valid until **2022-03-14**.

Issued at **Houston** on **2017-03-15**

DNV GL local station: **Houston**

for **DNV GL**

Approval Engineer: **Srujanbabu Sridharala**

.....
Brandon D Caraway
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

Product description

- Centaur 40/50 & Taurus 60/65 CS/MD Driver
- Taurus 70 CS/MD Driver
- Mars 90, 100 CS/MD Driver
- Titan 130 CS/MD Driver
- Centaur 40/50 & Taurus 60/65 Compressor Driven Frame Assembly
- Taurus 70 Compressor Driven Frame Assembly
- Mars 90, 100 Compressor Driven Frame Assembly
- Titan 130 Compressor Driven Frame Assembly
- Titan 250 Compressor Driven Frame Assembly
- Centaur 40/50 & Taurus 60/65 Generator Sets Driver
- Taurus 70 AR Generator Sets Driver
- Mars 90, 100 Generator Sets Driver
- Titan 130 Generator Sets Driver
- Titan 250 Generator Sets Driver
- Mars 90, 100 Generator Sets Driven
- Titan 130 Generator Sets Driven
- Titan 250 Generator Sets Driven
- Titan 250 Generator Sets Driver/Driven Assembly

A. The following design codes/standards were used as references:

- AISC Steel Construction Manual, 9th Edition

B. Design limitations

Compressor Set & Mechanical Driver Frame Assemblies

Centaur 40/50 & Taurus 60/65 CS/MD Frame

- | | | |
|------------------------------|------------|------------|
| - Safe Working Load (SWL) | : 16111 kg | 35,520 lbs |
| - Maximum Sling Angle (Apex) | : 60° | |
| - Minimum Design Temperature | : -20 °C | -4 °F |

Taurus 70 CS/MD Frame

- | | | |
|------------------------------|------------|------------|
| - Safe Working Load (SWL) | : 24992 kg | 55,100 lbs |
| - Maximum Sling Angle (Apex) | : 60° | |
| - Minimum Design Temperature | : -20 °C | -4 °F |

Mars 90/100 CS/MD Frame

- | | | |
|------------------------------|------------|------------|
| - Safe Working Load (SWL) | : 35516 kg | 78,300 lbs |
| - Maximum Sling Angle (Apex) | : 60° | |
| - Minimum Design Temperature | : -20 °C | -4 °F |

Titan 130 CS/MD Frame

- | | | |
|------------------------------|------------|------------|
| - Safe Working Load (SWL) | : 41367 kg | 91,200 lbs |
| - Maximum Sling Angle (Apex) | : 60° | |
| - Minimum Design Temperature | : -20 °C | -4 °F |

Compressor Driven Frame Assemblies

Mars 90/100 Compressor Driven Frame Assembly C451/C452/C453

- | | | |
|------------------------------|------------|-------------|
| - Safe Working Load (SWL) | : 47717 kg | 105,200 lbs |
| - Maximum Sling Angle (Apex) | : 60° | |
| - Minimum Design Temperature | : -20 °C | -4 °F |

Mars 90/100 Compressor Driven Frame Assembly C51

- | | | |
|------------------------------|------------|------------|
| - Safe Working Load (SWL) | : 40006 kg | 88,200 lbs |
| - Maximum Sling Angle (Apex) | : 60° | |
| - Minimum Design Temperature | : -20 °C | -4 °F |

Mars 90/100 Compressor Driven Frame Assembly C651/652

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- Safe Working Load (SWL) : 51981 kg 114,600 lbs
- Maximum Sling Angle (Apex) : 60°
- Minimum Design Temperature : -20 °C -4 °F

Titan 130 Compressor Driven Frame Assembly C451/C452/C452

- Safe Working Load (SWL) : 49305 kg 108,700 lbs
- Maximum Sling Angle (Apex) : 60°
- Minimum Design Temperature : -20 °C -4 °F

Titan 130 Compressor Driven Frame Assembly C651/C652

- Safe Working Load (SWL) : 54433 kg 117,800 lbs
- Maximum Sling Angle (Apex) : 60°
- Minimum Design Temperature : -20 °C -4 °F

Titan 250 Compressor Driven Frame Assembly C61

- Safe Working Load (SWL) : 63793 kg 140,640 lbs
- Maximum Sling Angle (Apex) : 60°
- Minimum Design Temperature : -20 °C -4 °F

Combined Lifting of Compressor Driven Frame Assemblies with Appropriate CS/MD Drivers

Centaur 40/50 & Taurus 60/65 Compressor Driven Frame Assembly C334/C335/C336

- Safe Working Load (SWL) : 30118 kg 66,400 lbs
- Maximum Sling Angle (Apex) : 60°
- Minimum Design Temperature : -20 °C -4 °F

Centaur 40/50 & Taurus 60/65 Compressor Driven Frame Assembly C338

- Safe Working Load (SWL) : 31025 kg 68,400 lbs
- Maximum Sling Angle (Apex) : 60°
- Minimum Design Temperature : -20 °C -4 °F

Centaur 40/50 & Taurus 60/65 Compressor Driven Frame Assembly C401/C402

- Safe Working Load (SWL) : 34971 kg 77,100 lbs
- Maximum Sling Angle (Apex) : 60°
- Minimum Design Temperature : -20 °C -4 °F

Centaur 40/50 & Taurus 60/65 Compressor Driven Frame Assembly C404/C406

- Safe Working Load (SWL) : 35516 kg 78,300 lbs
- Maximum Sling Angle (Apex) : 60°
- Minimum Design Temperature : -20 °C -4 °F

Taurus 70 Compressor Driven Frame Assembly C401/C402

- Safe Working Load (SWL) : 45359 kg 100,000 lbs
- Maximum Sling Angle (Apex) : 60°
- Minimum Design Temperature : -20 °C -4 °F

Generator Set Driver Frame Assemblies

Centaur 40/50 & Taurus 60/65 Generator Sets Driver

- Safe Working Load (SWL) : 47400 kg 104,500 lbs
- Maximum Sling Angle (Apex) : 60°
- Minimum Design Temperature : -20 °C -4 °F

Taurus 70 Generator Sets Driver

- Safe Working Load (SWL) : 74026 kg 163,200 lbs
- Maximum Sling Angle (Apex) : 60°
- Minimum Design Temperature : -20 °C -4 °F

Titan 250 Generator Sets Driver

- Safe Working Load (SWL) : 61806 kg 136,260 lbs

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- Maximum Sling Angle (Apex) : 60°
- Minimum Design Temperature : -20 °C -4 °F

Generator Set Driven Frame Assemblies

Titan 250 Generator Sets Driven

- Safe Working Load (SWL) : 79252 kg 174,720 lbs
- Maximum Sling Angle (Apex) : 60°
- Minimum Design Temperature : -20 °C -4 °F

Combined Lifting of Generator Set Driver frame with Generator Set Driven Frame Assemblies

Mars 90/100 Generator Sets Driver/Driven

- Safe Working Load (SWL) : 90074 kg 198,580 lbs
- Maximum Sling Angle (Apex) : 60°
- Minimum Design Temperature : -20 °C -4 °F

Titan 130 Generator Sets Driver/Driven

- Safe Working Load (SWL) : 101888 kg 224,625 lbs
- Maximum Sling Angle (Apex) : 60°
- Minimum Design Temperature : -20 °C -4 °F

Titan 250 Generator Sets Driver/Driven

- Safe Working Load (SWL) : 141058 kg 310,980 lbs
- Maximum Sling Angle (Apex) : 60°
- Minimum Design Temperature : -20 °C -4 °F

C. Design specifications

Drawings:

Compressor Driven Frame Assemblies

- Dwg. No.	Rev.	Title
- 1066548	D	Centaur 40/50 Taurus 60/65 Compressor Driven Frame Assy C334/C335/C336
- 1065877- 101		Frame, Fab, Drvn, PCUC, C334/5/6
- 1067657- 100		Beam, Assy, Left Hand
- 1067655-1		Beam, Left Hand
- 232698-201		Bollard Assy, Rear Box Sub
- 1027157-1		Pipe Bollard Lifting Plate
- 184275-1		Channel Lifting Bollard
- 184276-1		Plate Seal, Pipe
- 231189-1		Plate, Interconnect
- 185954-2		Plate, Lifting
- 1063482-1		Plate, Column Support
- 1069199-1		Plate, Support, Transmitter Rack
- 1069202-1		Plate, Support
- 1067658- 100		Beam, Assy, Right Hand
- 1067656-1		Beam, Right Hand
- 1065878- 101		Mdl, Assy, Cprsr, C334/5/6
- 1066254-1		Pad, Compressor
- 1071750-11		Plt, Bulkhead
- 1064551-1		Plate, Strut
- 231357-1		Plate, Tie Down
- 1025504-1		Angle, Seal, Driven
- 1069492-11		Plt, Drip Pan
- 1066549	D	Centaur 40/50 Taurus 60/65 Compressor Driven Frame Assy C338
- 1065871- 100		Frame, Fab, Drvn, PCUC, C334/5/6
- 1067652- 100		Beam, Assy, L/H
- 1067650-1		Beam, L/H
- 232698-201		Bollard Assy, Rear Box Sub
- 1027157-1		Pipe Bollard Lifting Plate
- 184275-1		Channel Lifting Bollard
- 184276-1		Plate Seal, Pipe
- 231189-1		Plate, Interconnect
- 185954-2		Plate, Lifting
- 1063482-1		Plate, Column Support
- 1069199-1		Plate, Support, Transmitter Rack
- 1069202-1		Plate, Support
- 1067653- 100		Beam, Assy, R/H
- 1067651-1		Beam, R/H
- 1065872- 100		Module, Cprse, Subassy, C338, Driven
- 1071750-1		Pl, Blkh
- 1064550-1		Pad, Compressor
- 1028554-1		Plate, Strut

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<u>Dwg. No.</u>	<u>Rev.</u>	<u>Title</u>
- 1072196-1		Pl, Drip Pan
- 1025504-1		Angle, Seal, Driven
- 231357-1		Plate, Tie Down
- 1066550	F	Centaur 40/50 Taurus 60/65 Compressor Driven Frame Assy C401/C402
- 1067202-101		Frame, Assy, Drvn, Fabrication
- 1067202-101		I-Beam, Assy, L/H
- 1067204-2		Beam, L/H
- 232698-201		Bollard Assy, Rear Box Sub
- 1027157-1		Pipe Bollard Lifting Plate
- 184275-1		Channel Lifting Bollard
- 184276-1		Plate Seal, Pipe
- 231189-1		Plate, Interconnect
- 185954-2		Plate, Lifting
- 1063482-1		Plate, Column Support
- 1069199-1		Plate, Support, Transmitter Rack
- 1069202-1		Plate, Support
- 1067203-101		I-Beam Assy, R/H
- 1067205-1		I-Beam, R/H
- 1065903-101		Mdl, Cprsr
- 1071804-1		Pl, Blkhd
- 232939-1		Pad, Compressor
- 232396-1		Pad, Compressor
- 1066478-2		Drip Pan
- 1025504-1		Angle, Seal, Driven
- 231357-1		Plate, Tie Down
- 1066551	C	Centaur 40/50 Taurus 60/65 Compressor Driven Frame Assy C404/C406
- 1067567-100		Frame, Assy, Fab, C404/C406, Driven
- 1070006-100		Beam, Assy, Left-Side
- 1070008-1		Beam, Left-Hand
- 232698-201		Bollard Assy, Rear Box Sub
- 1027157-1		Pipe Bollard Lifting Plate
- 184275-1		Channel Lifting Bollard
- 184276-1		Plate Seal, Pipe
- 231189-1		Plate, Interconnect
- 185954-2		Plate, Lifting
- 1063482-1		Plate, Column Support
- 1069199-1		Plate, Support, Transmitter Rack
- 1069202-1		Plate, Support
- 1070007-100		Beam Assy, Right-Side
- 1070009-1		Beam, Right-Hand
- 1070004-100		Mdl, Cprsr, C404/C406
- 1022385-1		Pad, Compressor

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<u>Dwg. No.</u>	<u>Rev.</u>	<u>Title</u>
- 1022458-1		Plate, Strut
- 1072129-1		Plate, Blkh
- 1070010-1		Drip Pan
- 1025504-1		Angle, Seal, Driven
- 231357-1		Plate, Tie Down
- 1075297	E	Mars 90, 100 Compressor Driven Frame Assy C451/C452/C453
- 1075096- 100		Frame, Fab Mars, Drvn, C451/2/3
- 1075292- 100		Beam, Assy, Right-Hand
- 1075091-1		Beam, Right-Hand
- 1045686- 100		Lifting Bollard, Assembly
- 1020063-1		Pipe, Bollard Lifting
- 1027157-1		Plate, Bollard End
- 1022743-1		Plate, Closure C651-C652
- 1016255-1		Plate, Seal, Pipe
- 1045687- 100		Lifting Bollard, Assembly
- 1022743-2		Plate, Closure C651-C652
- 1054087-1		Pad, Enclosure
- 1031185-2		Angle, Support
- 1075160-1		Plate, Dry Seal Module, Support
- 1023136-1		Plate, Gusset
- 1075294- 100		Beam, Assy, Left Hand
- 1075293-1		Beam, Left Hand
- 1069199-1		Plate, Support, Transmitter Pack
- 1069202-1		Plate, Support
- 1075111- 100		Module, Assy, Cprsr, C451/2/3
- 1075110-1		Plate, Bulkhead
- 1075109-1		Plate, Bulkhead
- 1075108-1		Plate, Bulkhead
- 1019761-1		Pad, Tie Down
- 1075295-1		Plate, Drip Pan
- 1019760-1		Gusset
- 1075169-1		Angle, Drvr to Drvn Seal Mnt
- 1075112-1		Angle, Manifold, Support
- 1075123	F	Mars 90, 100 Compressor Driven Frame Assy C51
- 1075122- 100		Frame, Fab Mars, Drvn, C51-All
- 1075119- 100		Beam, Assy, Right Hand
- 1075118-1		Beam, Right Hand
- 1045687- 100		Lifting Bollard, Assembly
- 1020063-1		Pipe, Bollard Lifting
- 1027157-1		Plate, Bollard End
- 1022743-2		Plate, Closure C651-C652

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<u>Dwg. No.</u>	<u>Rev.</u>	<u>Title</u>
- 1016255-1		Plate, Seal, Pipe
- 1045686-100		Lifting Bollard, Assembly
- 1031185-1		Angle, Support
- 1075160-1		Plate, Dry Seal Module, Support
- 1023136-1		Plate, Gusset
- 1054087-1		Pad, Enclosure
- 1075121-100		Beam, Assy, Left Hand
- 1075120-1		Beam, Left Hand
- 1069199-1		Plate, Support, Transmitter Rack
- 1069202-1		Plate, Support
- 1075116-100		Module, Assy, Cprsr, C51-All
- 1075114-1		Plate, Cprsr Pad, C51
- 1075115-1		Plate, Bulkhead
- 1075113-1		Strut, Sprsr Module
- 1019761-1		Pad, Tie-Down
- 1075117-1		Plate, Drip Pan
- 1075169-1		Angle, Drvr to Drvn Seal Mnt
- 1075112-1		Angle, Manifold, Support
- 1075128-1		Plate, Shear
- 1075129-1		Plate, Shear
- 1075104	F	Mars 90, 100 Compressor Driven Frame Assy C651/652
- 1075096-100		Frame, Fab Mars, Drvn, C451/2/3
- 1075292-100		Beam, Assy, Right-Hand
- 1075091-1		Beam, Right-Hand
- 1045686-100		Lifting Bollard, Assembly
- 1020063-1		Pipe, Bollard Lifting
- 1027157-1		Plate, Bollard End
- 1022743-1		Plate, Closure C651-C652
- 1016255-1		Plate, Seal, Pipe
- 1045687-100		Lifting Bollard, Assembly
- 1022743-2		Plate, Closure C651-C652
- 1054087-1		Pad, Enclosure
- 1031185-2		Angle, Support
- 1075160-1		Plate, Dry Seal Module, Support
- 1023136-1		Plate, Gusset
- 1075294-100		Beam, Assy, Left Hand
- 1075293-1		Beam, Left Hand
- 1069199-1		Plate, Support, Transmitter Pack
- 1069202-1		Plate, Support
- 1075111-100		Module, Assy, Cprsr, C451/2/3
- 1075110-1		Plate, Bulkhead
- 1075109-1		Plate, Bulkhead
- 1075108-1		Plate, Bulkhead
- 1019761-1		Pad, Tie Down

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- 1075295-1		Plate, Drip Pan
- 1019760-1		Gusset
- 1075169-1		Angle, Drvr to Drvn Seal Mnt
- 1075112-1		Angle, Manifold, Support
- 1078388	E	Taurus 70 Compressor Driven Frame Assy C401/C402
- 1078387- 101		Frame, Fab T70, Driven, C401-C402
- 1078385- 101		Beam, Assy, Right Hand
- 1078383-1		Beam, Right Hand
- 1082227-1		Plate, Lifting
- 1010526- 102		Lift Assy, Frame Assy
- 1008216- 102		Lift Assy, Package
- 1027157-1		Plate, Lift Flange
- 1008260-1		Plate, Lift Seal
- 1018149-1		Channel, Lift
- 1062013-1		Pad, Enclosure
- 1010528-1		Pad, Interconnect
- 1078386- 101		Beam, Assy, Left Hand
- 1078384-1		Beam, Left Hand
- 1069199-1		Plate, Support, Transmitter Rack
- 1069202-1		Plate, Support
- 1078381- 101		Module, Assy, T-70 Cprsr, C401/C402
- 1078380-2		Plate, Bulkhead
- 1082256-1		Pad, Key, C401/C402 Cprsr
- 1033238-1		Plate
- 1010537-1		Pad, Tie Down
- 1078382-2		Plate, Drip Pan
- 1078379-2		Plate, Shear
- 1075140	F	Titan 130 Compressor Driven Frame Assy C451/C452/C453
- 1075139- 100		Frame, Fab T130, Drvn, C451/2/3
- 1075136- 100		Beam, Assy, Right Hand
- 1075135-1		Beam, Right Hand
- 1045686- 100		Lifting Bollard, Assembly
- 1020063-1		Pipe, Bollard Lifting
- 1027157-1		Plate, Bollard End
- 1022743-2		Plate, Closure C651-C652
- 1016255-1		Plate, Seal, Pipe
- 1045687- 100		Lifting Bollard, Assembly
- 1031185-2		Angle, Support
- 1075160-1		Plate, Dry Seal Module, Support
- 1075138-		Beam, Assy, Left Hand

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<u>Dwg. No.</u>	<u>Rev.</u>	<u>Title</u>
100		
- 1075137-1		Beam, Left Hand
- 1069199-1		Plate, Support, Transmitter Rack
- 1069202-1		Plate Support
- 1075130-100		Module, Assy, Cprsr, C451/2/3
- 1075133-1		Plate, Bulkhead
- 1075132-1		Plate, Bulkhead
- 1075131-1		Plate, Bulkhead
- 1019761-1		Pad, Tie Down
- 1075134-1		Plate, Drip Pan
- 1019760-1		Gusset
- 1075170-1		Angle, Drvr to Drvn Seal Mnt
- 1075141-1		Angle, Manifold, Support
- 1075150	G	Titan 130 Compressor Driven Frame Assy C651/C652
- 1075149-100		Frame, Fab T130, Drvn, C651/2
- 1075146-100		Beam, Assy, Right Hand
- 1075145-1		Beam, Right Hand
- 1045687-100		Lifting Bollard, Assembly
- 1020063-1		Pipe, Bollard Lifting
- 1027157-1		Plate, Bollard End
- 1022743-2		Plate, Closure C651-C652
- 1016255-1		Plate, Seal, Pipe
- 1045686-100		Lifting Bollard, Assembly
- 1031185-2		Angle, Support
- 1075160-1		Plate, Dry Seal Module, Support
- 1023136-1		Plate, Gusset
- 1054087-1		Pad, Enclosure
- 1075148-100		Module, Assy, Left Hand
- 1075147-1		Beam, Left Hand
- 1069202-1		Plate, Support
- 1075144-100		Module, Assy, Cprsr, C651/2
- 1075143-1		Plate, Bulkhead
- 1075142-1		Plate, Bulkhead
- 1019761-1		Pad, Tie Down
- 1075151-1		Plate, Drip Pan
- 1019760-1		Gusset
- 1075170-1		Angle, Drvr to Drvn Seal Mnt
- 1075141-1		Angle, Manifold, Support
- 1114798	D	C40/50 & T60 Compressor Driven Frame Assy C334/5/6/8
- 1114824	C	C40/50 & T60 Compressor Driven Frame Assy C402
- 1114810	D	C40 Compressor Driven Frame Assy C404/5/6
- 1114865	D	C50 & T60 Compressor Driven Frame Assy C404/5/6
- 1114885	D	T60 Compressor Driven Frame Assy C505
- 1114774	D	Taurus 70 Compressor Driven Frame Assy C402

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- Dwg. No.	Rev.	Title
- 1114158	E	Taurus 70 Compressor Driven Frame Assy C404/5/6
- 1114088	E	Taurus 70 Compressor Driven Frame Assy C41
- 1114785	D	Taurus 70 Compressor Driven Frame Assy C452
- 1114832	D	Taurus 70 Compressor Driven Frame Assy C453
- 1114108	E	Taurus 70 Compressor Driven Frame Assy C51
- 1113998	D	Mars 90/100 Compressor Driven Frame Assy C41
- 1114049	D	Mars 90/100 Compressor Driven Frame Assy C452
- 1114614	C	Mars 90/100 Compressor Driven Frame Assy C453
- 1114014	D	Mars 90/100 Compressor Driven Frame Assy C51
- 1114030	D	Mars 90/100 Compressor Driven Frame Assy C61
- 1114078	D	Mars 90/100 Compressor Driven Frame Assy C652
- 1129048	A	Mars 90/100 Compressor Driven Frame Assy C752
- 1114096	D	Titan 130 Compressor Driven Frame Assy C41
- 1120582	B	Titan 130 Compressor Driven Frame Assy C452
- 1114147	C	Titan 130 Compressor Driven Frame Assy C453
- 1114112	D	Titan 130 Compressor Driven Frame Assy C51
- 1114129	D	Titan 130 Compressor Driven Frame Assy C61
- 1114165	C	Titan 130 Compressor Driven Frame Assy C652
- 1128924	B	Titan 130 Compressor Driven Frame Assy C752
- 1102862	E	Titan 250 Compressor Driven Frame Assy C61

Compressor Set and Mechanical Driver Frame Assemblies

- Dwg. No.	Rev.	Title
- 1072982	C	Centaur 40/50 Taurus 60/65 CS/MD Driver Frame Assy
- 1072980		Frame, Assembly, C40/50 T60/65 CS/MD Driver
- 1073587-1		Plate, Tie-Down Front
- 230897-1		Plate, Tie-Down Side
- 1062013-1		Pad, Enclosure
- 1062202-1		Plate, Front Box Support
- 1033225-1		Plate, Trunion Mount
- 1072001-11		Plate, Pannier Equipment Bay
- 1072000-11		Plate, Pannier Equipment Bay
- 1072995-101		Rear Box Sub Assembly
- 1034307-1		Plate, Internal
- 1034306-1		Plate, Internal
- 232698-201		Lifting, Assy
- 184276-1		Plate Seal, Pipe
- 184275-1		Channel Lifting Bollard
- 1027157-1		Pipe Bollard Lifting Plate
- 1072340-1		Plate, Top
- 1072339-11		Plate, Top
- 1062019-102		Plate, Assy, Right
- 1062012-12		Plate, Rear Box Right Side
- 230895-1		Plate, Left
- 1062008-1		Plate, Bottom
- 1072994-101		Center Box Sub Assembly
- 1062018-100		Angle Assy
- 1033391-1		Plate, Forward Mount
- 1073582-11		Plate, Top
- 1062006-1		Plate, Support
- 1062011-1		Plate, Baffle
- 1062007-1		Plate, Baffle, Mount
- 1072457-1		Plate, Formed
- 1072997-100		Front Box Sub Assembly
- 1072181-3		Plate

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<u>Dwg. No.</u>	<u>Rev.</u>	<u>Title</u>
- 1072181-1		Plate
- 1072181-3		Plate
- 1072180-1		Plate
- 1059787-1		Gusset, Front Box
- 1062003-1		Plate, Bottom
- 1062004-1		Plate, Bottom
- 1059721-100		Frame Sub Assy, Front Box LS
- 232692-101		Lift Assy, 6"
- 1027157-1		Flange, Lift
- 184276-1		Plate, Seal
- 185608-1		Plate, Front Lift
- 1059730-1		Plate, Front Box Left
- 1059720-100		Frame Sub Assy, Front Box LS
- 1059721-1		Plate, Front Box Right
- 1074563	E	Mars 90, 100 CS/MD Driver Frame Assy
- 1081643-100		Tank Assy, Mars/O C.S.
- 1081642-100		Tank Assy, Aft
- 1020059-1		Bottom Plate, Aft Tank
- 1019948-1		Plate, Side, Tank Aft
- 1064365-1		Plate, Aft Tank Right C.S.
- 1064364-1		Plate, Aft Tank C.S.
- 1081641-1		Plate, Tank
- 1081644-1		Plate, Tank
- 1081645-1		Bulk Head, Aft Tank
- 1081646-1		Plate, Louver Tank Aft
- 1064782-100		Tank, Mid, Assembly
- 1064783-1		Plate, Mid Tank CS/MD
- 1024707-1		Clip, Retaining Baffle
- 1024476-2		Stiffener, Tank Mid
- 1063954-100		Tank, Assy Fwd C.S.
- 1020002-1		Plate, Tank Formed
- 1064356-1		Plate, End, Fwd
- 1020003-2		Bulkhead
- 1020004-1		Bulkhead
- 1020009-1		Plate, End, Aft
- 1056102-1		Bulkhead
- 1056101-1		Bulkhead
- 1024297-1		Bulkhead
- 1020194-5		Bulkhead
- 1020195-1		Bulkhead
- 957130C1		Boss 1.0 Tube, S80 Flat Run
- 1019964-1		Bulkhead
- 1020197-1		Bulkhead
- 1063912-100		Tank Top Assy, Fwd C.S.
- 1063911-1		Plate, Top Tank
- 1020012-100		Assy, Frame Angle
- 1081649-100		Tank Top Assy, Mid C.S.
- 1064849-1		Tank Top, Mid C.S.
- 1020012-100		Angle Assy, Frame
- 1081640-100		Tank Top Assy, Aft C.S.
- 1081653-1		Plate, Top Tank
- 1033658-4		Plate, Access
- 1020010-1		Plate, Closure
- 1024891-1		Plate, Closure

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<u>Dwg. No.</u>	<u>Rev.</u>	<u>Title</u>
- 1024709-1		Plate, Closure
- 1024710-1		Plate, Closure
- 1024711-1		Plate, Closure
- 1024712-1		Plate, Closure
- 1038974-1		Bulkhead Center
- 1040092-1		Plate, Closure
- 1020023-100		Tank Support Assy
- 1047225-1		Angle Support
- 1019901-1		Gusset Support Tank
- 1074562-100		Frame Assembly, Mars CSMD
- 1077274-100		Frame Assy, Mars Driven Fab.
- 1063916-101		Beam Assy, Left Hand
- 1064296-1		Beam, Left Side
- 1045686-100		Bollard Assy
- 1020063-1		Pipe Bollard Lifting
- 1027157-1		Pipe Bollard Lifting Plate
- 1022743-1		Channel Lifting Bollard
- 1016255-1		Plate Seal, Pipe
- 1045687-100		Bollard Assy
- 1054087-1		Pad, Enclosure Mount
- 1019764-1		Gusset
- 1063913-100		Beam Assy, Right Hand
- 1064295-1		Beam, Right Side
- 1019769-101		Plate Assy, Interface
- 1019757-1		Plate, Closure Interface
- 1020320-1		Bar, Support
- 1019756-1		Plate, Interface
- 1024769-100		Tunnel Assy
- 1077079-1		Plate, Fwd
- 1019767-101		Mount Assy Aft
- 1019755-2		Mounting Pad
- 1019761-1		Pad Tie Down
- 1019770-1		Plate, Aft Eng
- 1019772-1		Tube, Closure
- 1019771-1		Plate, Closure
- 1040475-100		Mount Assy, Fwd Engine
- 1019761-1		Pad, Tie Down
- 1040474-1		Closure Plate
- 1040469-1		Mounting Pads
- 1031617-1		Tube Closure
- 1040473-1		Plate, Mounting Fwd
- 1019776-1		Plate, Closure
- 1040472-1		Plate, Mounting Fwd
- 1020068-1		Plate, Support
- 1077082-1		Plate, Fwd
- 1019761-1		Pad, Tie Down
- 1054087-1		Pad, Enclosure
- 1019765-1		Gusset
- 1019760-1		Gusset
- 1019758-1		Plate, Drip Forward
- 1019759-1		Plate, Drip Aft
- 1059709-1		Pad, Enclosure
- 1019909-1		Delrin Isolator
- 1067756	F	Taurus 70 CS/MD Driver Frame Assy

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<u>Dwg. No.</u>	<u>Rev.</u>	<u>Title</u>
- 1067755-101		Frame Assy, Fabrication
- 1067763-101		Frame Subassy, Front Box
- 1067766-101		Frame Subassembly Front Box
- 1068022-1		Plate, Front Box Bottom, Bent
- 1008230-2		Plate, Front Box Left Lift
- 1008231-1		Plate, Front Box Right Lift
- 1067751-2		Plate, Front Box Top
- 1008263-1		Block, Tank Drain
- 1067764-100		Frame Subassembly Right Front Box
- 1008216-102		Lift Assy, Front/Rear
- 1027157-1		Plate, Lift Flange
- 1008260-1		Plate, Lift Seal
- 1067768-1		Plate, Front Box Rt, Bent
- 1067765-100		Frame Subassembly Left Front Box
- 1067767-1		Plate, Front Box Lt, Bent
- 1045849-1		Plate, Formed Tunnel
- 1028050-2		Plate, Conduit Mount
- 1059787-1		Gusset
- 1068023-100		Frame Subassy, Center Box
- 1008234-1		Plate, Formed
- 1068044-100		Center Box Right Assy
- 1068025-1		Plate, Center Box Right
- 1068024-1		Center Box Left
- 1052793-1		Plate, Top
- 1008221-100		Plate Mount Assy Front
- 185028-3		Boss, .75UNC
- 1008238-1		Plate, Center Box Front Mt
- 1052794-1		Center Box, Rear
- 1049914-1		Plate, Baffle Support
- 1008241-1		Center, Baffle
- 1052767-1		Plate, Baffle Support
- 201102-1		Boss
- 1008279-1		Plate, Tray Support
- 1008279-2		Plate, Tray Support
- 1052814-1		Plate, Support, Pipe
- 1053043-3		Adapter
- 1052813-1		Plate, Support, Pipe
- 1067886-101		Frame Subassy, Rear Box
- 1008224-102		Frame Subassy Lt Rear Plate
- 1008251-2		Plate, Rear Box Left Side
- 1008222-101		Frame, Sub-Assy, Left Rear Lift
- 108257-2		Plate, Rear Box Lt Side Lift
- 1008225-103		Frame Subassy Rt Rear Plate
- 1008252-4		Plate, Rear Box Right Side
- 1008258-2		Plate, Rear Box Right Side
- 1008245-1		Plate, Rear Box Trunion
- 1008247-1		Plate, Rear Box Ct Support
- 1067842-1		Plate, Rear Box Interconnect
- 1070863-1		Plate, Rear Bottom, Bent
- 1008253-1		Plate, Rear Box Ct Support
- 1068026-2		Plate, Rear Box Top
- 1008255-2		Plate, Rear Box Ct Support
- 1008256-1		Plate, Rear Box Side Support
- 1008250-1		Plate, Rear Box Tie-Down
- 1008233-1		Plate, Front Box Tie-Down
- 1008244-1		Plate, Pannier Drain

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<u>Dwg. No.</u>	<u>Rev.</u>	<u>Title</u>
- 1008229-1		Plate, Front Center Bent
- 1062013-1		Pad, Enclosure
- 1010801-1		Boss, .50 THD
- 1067937-100		Frame Subassy, Cust Conn
- 1067904-1		Plate, Customer Conn
- 1067938-100		Frame Subassy, Cust Conn
- 1067905-1		Plate, Customer Conn
- 1008243-1		Tube, Pannier Drain
- 1009108-1		Tube, Enclosure Support
- 1067830-1		Gusset, Enclosure Supp
- 1067939-1		Gusset, Enclosure Supp
- 1062013-1		Pad, Enclosure
- 1077419	P	Titan 130 CS/MD Driver Frame Assy
- 1077420-100		Frame Assy, Fabrication, Titan
- 1064323-100		Beam Assembly, Left Hand
- 1064309-1		Beam, Left Hand
- 1045686-100		Bollard Assy
- 1020063-1		Pipe Bollard Lifting
- 1027157-1		Pipe Bollard Lifting Plate
- 1022743-1		Channel Lifting Bollard
- 1016255-1		Plate Seal, Pipe
- 145687-100		Bolard Assy
- 1024687-1		Gusset
- 1064322-100		Beam Assembly, Right Hand
- 1064310-1		Beam, Right Hand
- 1024248-101		Plate Assy, Interface
- 1024183-1		Plate, Closure Interface
- 1024184-1		Plate, Interface
- 1020320-1		Bar, Support
- 1024769-100		Tube Assembly
- 1077421-1		Plate, Fwd
- 1029211-102		Mount Assy, Aft Engine
- 1029212-2		Pad, Mounting
- 1019761-1		Pad, Tie Down
- 1024166-1		Plate, Aft Eng
- 1024247-1		Tube, Closure
- 1024168-1		Plate, Closure
- 1024141-1		Bulkhead
- 1067008-11		Plate, Fwd
- 1019761-1		Pad, Tie Down
- 1019760-1		Gusset
- 1028459-1		Pad
- 1037024-1		Pad
- 1029255		Gusset
- 1023992-1		Drip Pan
- 1023991-1		Drip Pan
- 1054087-1		Pad, Enclosure
- 1059709-1		Pad, Enclosure
- 1080841-100		Tank, Assy, fab, Titan CSMD
- 1081662-100		Tank, Assy, Aft Titan CSMD
- 1024478-1		Bottom Plate, Aft Tank
- 1024479-1		Side Plate, Aft Tank
- 1064380-1		Plate, Left Side, Aft Tank, Titan CS/MD
- 1064381-1		Plate, Aft Tank-Right

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- Dwg. No.	Rev.	Title
- 1081663-1		Blkhhd, Aft Tank
- 1081665-1		Plt, Tank
- 1081664-1		Plt, Tank
- 1081666-1		Plt, Tank, Lvr, Aft
- 1064784-100		Mid Tank Assembly Titan CS/MD
- 1064785-1		Plate, Mid Tank, Titan CS/MD
- 1024707-1		Clip, Retainer Baffle
- 1024476-4		Stiffener, Tank Mid
- 1063951-100		Tank Assembly, Forward, Titan CS/MD
- 1024339-1		Bent Plate, Fwd Tank
- 1064384-1		End Plate, Fwd Tank
- 1024293-11		Bulkhead, Fwd Tank
- 1024294-1		Bulkhead, Fwd Tank
- 1024302-1		Front Plate, Fwd Tank
- 1062523-1		Bulkhead, Fwd Tank
- 1056103-1		Bulkhead, Fwd Tank
- 1024297-1		Louver, Fwd Tank
- 1024298-11		Bulkhead, Fwd Tank
- 1024299-1		Bulkhead, Fwd Tank
- 1024300-1		Bulkhead, Fwd Tank
- 1024301-1		Bulkhead, Fwd Tank
- 1029539-1		Stiffener
- 1080842-100		Top Assy, Top Assy
- 1080843-1		Top Plate, Tank-Fwd
- 1020012-100		Angle Assy, Frame
- 1080844-100		Mid Tank Top Assy, Titan CS/MD
- 1080845-1		Plate, Top Mid Tank, Titan CS/MD
- 1081661-100		Tank, Top Assy, Aft, Titan CS/MD
- 1081660-1		Tank, Top, Aft, Titan CS/MD
- 1033658-4		Plate, Acces
- 1032912-101		Tank Support Assembly
- 1047967		Angle, Support
- 1032911-1		Gusset Support Tank
- 1020010-1		Plate, Closure
- 1025132-1		Plate, Formed
- 1024717-1		Pad, Mounting-Fwd
- 1024711-1		Plate, Closure
- 1024712-1		Plate, Closure
- 1024709-1		Plate, Closure
- 1024710-1		Plate, Closure
- 1024891-1		Plate, Closure
- 1034760-101		Tank Support Assembly
- 1034761-1		Gusset Support Tank
- 1040092-1		Plate, Closure

- 1108050	H	C40/50 & T60/65 CSMD Driver Frame Assy
- 1074563	K	Mars 90/100 CSMD Driver Frame Assy
- 1106922	G	Taurus 70 CSMD Driver Frame Assy
- 1077419	P	Titan 130 CSMD Driver Frame Assy

Generator Set Driver Frame Assemblies

- Dwg. No.	Rev.	Title
- 1068961	G	Centaur 40/50 Taurus 60/65 Generator Set Driver Frame Assy
- 1065960-101		Frame Assembly, Fabrication, Centaur

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<u>- Dwg. No.</u>	<u>Rev.</u>	<u>Title</u>
- 1066385-101		Gearbox Support/Tank Assy
- 1066384-100		Bulkhead, Aft Assy
- 1066408-1		Bulkhead, Gearbox, Aft
- 1066404-1		Bulkhead, Gearbox Support Assy
- 1066409-1		Bulkhead, Gearbox Support Assy
- 1066824-1		Bulkhead, Tank, Right
- 1069466-11		Bulkhead, Tank, Left
- 1066386-100		Tank, Top Plate, Assy
- 1066387-1		Plate, Tank Top
- 1025276-100		Angle Assy
- 1066722-1		Plate, Tank Baffle
- 1066723-1		Plate, Tank Baffle
- 1068913-1		Plate, Tank Closure
- 1063727-2		Pad, GB Mount
- 1068914-1		Plate, Tank Bottom
- 1068946-100		Frame, Eng, Supp
- 1066155-101		Bulkhead, Gen Assy
- 1066028-1		Bulkhead, Gen Aft
- 1066029-1		Bulkhead Support Gen
- 1066822-1		Bulkhead, Generator Support
- 1066823-1		Bulkhead, Gen
- 1069033-1		Plate, Gen Assy Top
- 1069036-1		Pad, Gen Aft
- 1069037-11		Pad, Gen Fwd
- 1073794-11		Plate, Support
- 1070038-1		Rail, Electrical, Customer Conn.
- 1066119-101		Beam, Frame Right Assy
- 1066102-1		Beam, Right Hand
- 1050090-1		Gusset Lifting
- 1067179-1		Gusset Mounting Support
- 1066120-101		Beam Assy, Left Hand
- 1066102-1		Beam, Right Hand
- 1050090-1		Gusset Lifting
- 1067179-1		Gusset Mounting Support
- 1066120-101		Beam Assy, Left Hand
- 1066102-1		Beam, Right Hand
- 1050090-1		Gusset Lifting
- 1067179-1		Gusset Mounting Support
- 1066120-101		Beam Assy, Left Hand
- 1066103-11		Beam, Left Hand
- 1068883-100		Beam, Frame Aft Assy
- 1066105-1		Beam, Frame Aft
- 1070029-1		Plate
- 1063482-1		Plate, Column Support
- 1070781-1		Plate, Drip Pan Aft
- 1069305-100		Angle, Frame, Assy
- 1069313-1		Angle, Frame
- 1069314-1		Angle, Frame
- 1069315-1		Angle, Frame
- 1068895-100		Cable Tray, Assy
- 1061488-2		Bar, Cable Support
- 1068896-1		Cable Guide
- 1068730-1		Plate, Gen Blkhd, BTM
- 1068731-1		Plate, Drip Pan Aft
- 1069068-1		Plate, Closure, Gen
- 1067022-2		Pad, Frame Mounting

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<u>Dwg. No.</u>	<u>Rev.</u>	<u>Title</u>
- 1067119-2		Pad, Frame Mounting Aft
- 1067545-2		Pad, Frame Mounting Left
- 1074203-100		Forward Beam Assy
- 1066104-1		Beam, Frame Fwd
- 1074204-1		Gusset, Forward Beam
- 1074205-1		Gusset, Forward Beam
- 1068762-11		Plate, Support Clip
- 1068763-11		Plate, Support Clip
- 1077286	F	Mars 90, 100 Generator Set Driver Frame Assy
- 1077285-100		Frame, Fab Assy, GS Driver
- 1077293-1		Beam, Forward End
- 1077282-100		Beam Assy, Right Hand
- 1077279-1		Beam, Right Hand
- 1077296-1		Plate, Interface
- 1043881-100		Bollard Assy, Lifting
- 1044460-1		Plate Bent, Lifting, Bollard
- 1077281-100		Beam Assy, Left Hand
- 1077280-1		Beam, Left Hand
- 1078626-1		Plate, Front Tie-Down
- 1077333-100		Beam, Trunion Support Assy
- 1077331-1		Beam, Trunion Support
- 1077344-1		Beam, Trunion Mount
- 1077340-1		Channel, Trunion
- 1077332-1		Gusset, Mount Support
- 1077365-100		Gearbox Module Assy, CS
- 1077923-1		Plate, Gearbox Mount
- 1077925-1		Plate, Picture Frame
- 1077927-1		Plate, Picture Frame, Large
- 1077363-1		Plate, Gearbox Bulkhead, Fwd
- 1077364-1		Plate, Gearbox Bulkhead
- 1077366-1		Plate, Gearbox Bulkhead, Short
- 1077391-1		Plate, Drain Tank Top
- 1077392-1		Plate, Drain Tank Mid
- 1077682-1		Plate, Drain Tank Fwd
- 1077683-1		Plate, Drain Tank, Baffle
- 1077727-1		Plate, Drain Tank, Baffle, Short
- 1078581-100		Drain Tank Top Assy
- 1025276-100		Angle, 25.5 In. X 24.5 In., CS
- 1077681-1		Plate, Drain Tank Top, Fwd
- 1078582-100		Gearbox Bulkhead Assy
- 1077361-1		Plate, Aft End
- 1079076-1		Plate, Drain Tank Closure
- 1077395-1		Plate, Drain Tank Closure
- 1077393-1		Plate, Drain Tank Bottom
- 1077546-100		Main Tank Assy
- 1078680-100		Cable Support Assy
- 1079095-1		Plate, Cable Support
- 1078678-1		Plate, Cable Guide
- 1081483-1		Plate, Cable Bracket, Short
- 1081041-300		Tube Assy
- 1077547-3		Channel, Main Tank
- 1079530-300		Door Assembly
- 1079529-3		Plate, Door
- 1077539-1		Plate, Main Tank, Fwd

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<u>Dwg. No.</u>	<u>Rev.</u>	<u>Title</u>
- 1077541-1		Plate, Main Tank, Baffle
- 1077542-1		Plate, Main Tank, Baffle, Small
- 1077545-100		Main Tank Top Assy
- 1020012-100		Angle Assy, Frame
- 1033658-4		Plate Acces
- 1077544-1		Plate, Main Tank, Top
- 1077763-1		Plate, Main Tank, Baffle, Small
- 1077832-100		Bulkhead, Main Tank Assy
- 1077538-1		Plate, Main Tank, Aft
- 1079049-1		Plate, Tank Top Closure
- 1079087-1		Plate, Drain Tank Close, Small
- 1059709-1		Pad, Enclosure
- 1080659-1		Plate, Support Bracket
- 1077394-1		Plate, End Top
- 1078607-1		Plate, Drip Pan, Main
- 1078608-1		Plate, Drip Pan, Aft
- 1054087-1		Pad, Enclosure
- 230900-17		Drain, Tank
- 1077840-1		Plate, Fwd Engine Mount
- 1077901-1		Gusset, Main Tank
- 1077540-1		Plate, Main Tank, Closure
- 1079083-1		Plate, Main Tank, Close
- 1077543-1		Plate, Main Tank, Bottom
- 1081002-1		Gusset, Main Tank
- 1081016-1		Plate, Drip Pan, Main
- 1057001-1		Pad, Tooling
- 1078679-100		Cable Support Assy
- 1079094-1		Bar, Cable Support
- 1077975-100		Cable Support Assy, Short
- 1077974-1		Plate, Cable Support, Short
- 1068896-1		Cable Guide
- 1072662	K	Taurus 70 Generator Set Driver Frame Assy
- 1072661-100		T70 AR Generator Set Fabrication Frame Assy
- 1072659-100		Left Beam Assy
- 1072654-1		Beam, Left Side
- 1043822-100		Bollard Assy
- 1042849-1		Channel
- 1054451-1		Pipe
- 1027157-1		Plate, Lifting
- 1016255-1		Plate, Seal
- 1067545-2		Tie-Down Plate
- 1048115-1		Gusset Plate
- 1061488-2		Bar, Cable Support
- 1068896-1		Plate, Cable Support
- 1067022-2		Tie-Down Plate
- 1071252-100		Gearbox-Tank Assy
- 1071249-1		Bulkhead, Oil Tank
- 1072695-1		Bulkhead, T70AR Gen. Set
- 1072694-1		Bulkhead, T70AR Gen. Set
- 1067155-1		Plate, Gearbox, Left Side
- 1067154-1		Plate, Gearbox, Right Side
- 1072698-1		Plate
- 1032930-2		Pad, Gearbox
- 1023858-100		Frame Assy
- 1054995-1		Plate, Closure

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<u>- Dwg. No.</u>	<u>Rev.</u>	<u>Title</u>
- 1042384-1		Plate, Closure
- 1055017-1		Plate, Closure
- 1066483-1		Plate, Oil Tank
- 1071250-100		Generator Assy
- 1071248-1		Bulkhead, Generator
- 1072697-1		Bulkhead
- 1072696-1		Bulkhead
- 1061271-1		Plate, Generator Pad
- 1061272-1		Plate, Generator End
- 1061330-1		Plate
- 1070038-1		Rail Electrical
- 1071696-100		Tank Top Assy
- 1071697-1		Plate, Tank Top
- 1025276-1		Frame Assy
- 1072680-100		Beam Assy, Forward
- 1072657-1		Beam, Forward
- 1025276-1		Gusset
- 1072680-100		Beam Assy, Aft
- 1072656-1		Beam, Aft
- 1044007-12		Plate
- 1072247-1		Gusset
- 1070029-1		Support, Fuel Valve
- 1072739-1		Support Tube
- 1031056-1		Pad, Engine Mount
- 1071538-1		Plate, Closure
- 1066315-1		Angle, Lube Oil Drain
- 1072674-1		Plate, Drip Pan
- 1068021-1		Plate, Drip Pan
- 1068702-1		Plate, Drip Pan
- 1063482-1		Plate, Column Support
- 1055023-1		Plate, Closure
- 1069305-100		MCT, Frame
- 1071540-1		Plate, Closure
- 1071539-1		Plate, Closure
- 1067003-2		Plate, Closure
- 1067004-2		Plate, Closure
- 1043987	M	Titan 130 Generator Set Driver Frame Assy
- 1043988-105		Frame Assy, Fab
- 1043989-103		Beam, Assy Left Side
- 1043990-4		Beam, LH
- 1043881-100		Bollard Assembly
- 1049551-1		Channel, Lifting
- 1053308-1		Plate, Bollard Lifting
- 1053306-1		Pipe, Lifting
- 1053307-1		Plate Seal, Pipe
- 1043883-1		Pad, Interface
- 1044460-1		Plate, Lifting
- 1058463-1		Plate, Doubler
- 1058464-1		Plate, Doubler
- 1043991-103		Beam, Assy Right Side
- 1043992-4		Beam, RH
- 1043993-101		Module Assy, Gear Box
- 1043996-2		Bulkhead, Fwd
- 1043995-2		Bulkhead, Aft

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<u>- Dwg. No.</u>	<u>Rev.</u>	<u>Title</u>
- 1044028-1		Bulkhead, Left Side
- 1043994-1		Bulkhead, Right Side
- 1049136-1		Pad, Gearbox
- 1043997-1		Tank Top
- 1023858-100		Frame Assy
- 1044307-1		Plate, Closure
- 1051019-1		Plate, Closure
- 1043998-101		Top Assy, Tank
- 1043999-2		Tank Top
- 1025276-100		Coaming Assembly
- 1053312-1		Trunnion, Bracket
- 1053311-2		Trunnion, Pad
- 1043884-1		Support, Engine
- 1044007-12		Support, Gimbal
- 1044004-1		End Plate, Aft
- 1052631-1		Plate, Support
- 1043886-1		Plate, Support
- 1053313-1		Plate, Support
- 1053314-1		Plate, Side
- 1044001-1		Bulkhead, Tank
- 1044002-1		Bulkhead, Tank
- 1044003-1		Bulkhead, Tank
- 1062759-1		End Plate, Fwd
- 1044097-11		Drippan, Aft
- 1044000-1		Plate, Closure
- 1044297-1		Plate, Closure
- 1062860-101		Engine Support Assy
- 1056391-2		Plate, Engine Support
- 1056374-1		Gusset, Engine Support
- 1041480-1		Pad, Tie-Down
- 1054087-1		Pad, Enclosure
- 1057315-1		Pad, Enclosure
- 1054513-1		Bar, Stiffener
- 1055489-1		Gusset, Support
- 1062739-1		Support
- 1114408	E	C40/50 & T60/65 Generator Set Driver Frame Assy
- 1113961	E	Mars 90/100 Generator Set Driver Frame Assy
- 1122448	A	Taurus 70 Generator Set Driver Frame Assy
- 1103192	F	Titan 130 Generator Set Driver Frame Assy
		Titan 250 Generator Set Driver Frame Assy (same as CSMD
- 1123298	D	Driver)

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Generator Set Driven Frame Assemblies

- Dwg. No.	Rev.	Title
- 1077356	B	Mars 90, 100 Generator Set Driven Frame Assy
- 1077355		Frame, Fab Assy, Left Hand
- 1077992-100		Beam Assy, Left Hand
- 1077989-1		Beam, Left Hand
- 1077296-1		Plate, Interface
- 1043881-100		Bollard Assy, Lifting
- 1049551-1		Channel, Lifting
- 1053308-1		Plate, Bollard Lifting
- 1053306-1		Pipe, Lifting
- 1053307-1		Plate Seal, Pipe
- 1044460-1		Plate Bent, Lifting, Bollard
- 230900-10		Drain, Tank
- 1077991-100		Beam Assy, Right Hand
- 1078035-100		Module, Generator, Fwd
- 1078034-100		Module, Generator, Aft
- 1077994-1		Plate, Forward End
- 1077995-1		Beam, Aft End
- 1078199-1		Plate, Driven, Bottom
- 1078195-1		Plate, Gen Mount Support
- 1078199-1		Plate, Driven, Bottom
- 1078195-1		Plate, Gen Mount Support
- 1078661-1		Plate, Column Support
- 1079524-1		Plate, Cable Guide
- 1078633-1		Plate, Aft Tie-Down, Right
- 1078634-1		Plate, Aft Tie-Down, Left
- 1057001-1		Pad, Tooling
- 10438393	J	Titan 130 Generator Set Driven Frame Assy
- 1048394-103		Frame Assy, Fab
- 1048397-101		Beam Assy, RH
- 1048398-11		Beam, Right Hand
- 1043883-1		Pad, Interface
- 1044460-1		Plate, Lifting
- 1043881-100		Bollard Assy
- 1049551-1		Channel, Lifting
- 1053308-1		Pipe, Lifting
- 1053306-1		Plate, Bollard Lifting
- 1053307-1		Plate, Seal, Pipe
- 1048395-101		Beam Assy, LH
- 1048399-101		Generator Module Fwd
- 1048400-2		Bulkhead
- 1048402-1		Pad, Mounting
- 1048414-102		Generator Module Aft
- 1048406-2		Bulkhead
- 1048617-21		Bulkhead
- 1048403-1		Pad, Mounting
- 1048405-11		Drip Pan, Fwd
- 1050837-1		Plate, End
- 1048404-1		Plate, Enclosure
- 1068621-1		Plate, Gimbal AVM Support
- 1070178-1		Plate, Gimbal AVM Support
- 1057001-1		Pad, Tooling
- 1062709-1		Plate-End
- 1062710-1		Plate-Side

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- Dwg. No.	Rev.	Title
- 1130781	B	Mars 90/100 Generator Set Driven Frame Assy
- 1130785	B	Mars 90/100 Generator Set Driven Frame Assy
- 1129433	C	Titan 130 Generator Set Driven Frame Assy
- 1129221	B	Titan 130 Generator Set Driven Frame Assy
- 1078968	F	Titan 250 Generator Set Driven Frame Assy

D. Material Specifications*

Material	Min. Yield	- Equipment
ASTM A36	36,000 psi	- Centaur 40/50 Taurus 60/65 Compressor Driven Frame C334/C335/C336 - Centaur 40/50 Taurus 60/65 Compressor Driven Frame C338 - Centaur 40/50 Taurus 60/65 Compressor Driven Frame C401/C402 - Centaur 40/50 Taurus 60/65 Compressor Driven Frame C404/C406 - Centaur 40/50 Taurus 60/65 CS/MD Frame - Taurus 70 Compressor Driven Frame C401/C402 - Taurus 70 CS/MD Frame - Taurus 70 AR Generator Set Frame - Mars 90, 100 Compressor Driven Frame Assy C451/C452/C453 - Mars 90, 100 Compressor Driven Frame Assy C51 - Mars 90, 100 Compressor Driven Frame Assy C651/C652 - Mars 90, 100 CS/MD Remaining Structural Components - Mars 90, 100 Generator Set Remaining Structural Components - Titan 130 Compressor Driven Frame C451/452/453 - Titan 130 Compressor Driven Frame C651/652 - Titan 130 CS/MD Remaining Structural Components - Titan 130 Generator Set Remaining Structural Components - Titan 250 Generator Set Minor Non Structural Components
ASTM A992	50,000 psi	- Centaur 40/50 Taurus 60/65 Generator Set Frame - Mars 90, 100 CS/MD I-beams - Mars 90, 100 Generator Set I-beams - Titan 130 CS/MD I-beams - Titan 130 Generator Set I-beams
ASTM A709	50,000 psi	- Titan 250 Generator Set Frame(I-beams, Lift gussets, plates)

*For more detailed information, see drawings

E. Calculations

- Engineering Report, Structural Analysis, Centaur-Taurus C334/5/6 Compressor Frame (1066548), Report: ER-10093, Rev. NC, Issued January 11, 2008
- Engineering Report, Structural Analysis, Centaur-Taurus C338 Compressor Frame (1066549), Report: ER-10094, Rev. NC, Issued January 11, 2008
- Engineering Report, Structural Analysis, Centaur-Taurus C401/2 Compressor Frame (1066550), Report: ER-10095, Rev. NC, Issued January 11, 2008
- Engineering Report, Structural Analysis, Centaur-Taurus C404/6 Compressor Frame (1066551), Report: ER-10096, Rev. NC, Issued January 11, 2008
- Engineering Report, Structural Analysis, Centaur-Taurus CS/MD Driver Frame (1072982), Report: ER-9535, Issued January 27, 2006 (Rev B)
- Engineering Report, Structural Analysis, Centaur-Taurus Generator Set Frame (1068961), Report: ER-9524, Issued January 27, 2006 (Rev B)
- Engineering Report, Structural Analysis, Taurus 70 C401/2 Compressor Frame (1078388), Report: ER-10098, Issued January 11, 2008
- Engineering Report, Structural Analysis, Taurus 70 CS/MD Driver Frame, Report: ER-9633, Issued April 10, 2006 (Rev B)
- Engineering Report, Structural Analysis, Taurus 70 Axial-Radial Generator Set Frame (1072662), Report: ER-9533, Issued January 27, 2006
- Engineering Report, Structural Analysis, Mars C451/2/3 Compressor Frame (1075297)
- Engineering Report, Structural Analysis, Mars C51 Compressor Frame (1075123), Report: ER-10100, Rev. A, Issued January 11, 2008
- Engineering Report, Structural Analysis, Mars C651/2 Compressor Frame (1075104), Report: ER-10101, Rev. A, Issued January 11, 2008
- Engineering Report, Structural Analysis, Mars CS/MD Driver Frame (1074563), Report: ER-9898, Rev. C, Issued March 30, 2007
- Engineering Report, Structural Analysis, Mars Generator Set, (Driver Frame: 1077286, Driven Frame: 1077356), Report: ER-9971, Issued September 19, 2007
- Engineering Report, Structural Analysis, Titan 130 C451/2/3 Compressor Frame (1075140), Report: ER-10102, Rev. B, Issued January 11, 2008
- Engineering Report, Structural Analysis, Titan 130 C651/2 Compressor Frame (1075150), Report: ER-10103, Rev. A, Issued January 11, 2008
- Engineering Report, Structural Analysis, Titan 130 CS/MD Driver Frame (1077419), Report: ER-9899, Rev. C, Issued April 10, 2007
- Engineering Report, Structural Analysis, Titan 130 Generator Set Frame (1043987, 1048393), Report: ER-9731, Issued October 13, 2006 (Rev A)
- Engineering Report, Structural Analysis, Titan 250 O&G Generator Set Frame (Driver: 1123298, Driven: 1078968), Report: ER-14813, Issued January 18, 2017 (Rev NC)

F. General Comment

This type approval replaces previous type approval S-7292.

G. Certificate retention survey

For retention of Type Approval, DNV GL surveyor shall perform a survey every second year and before expiry date of this certificate to verify that the condition of the Type approval are complied with.

END OF DESIGN ASSESSMENT