

US0D1006830S

(12) **United States Design Patent** (10) **Patent No.:** **US D1,006,830 S**
Koehn et al. (45) **Date of Patent:** **** Dec. 5, 2023**

(54) **CONTROL BOX FOR A DISPLACEMENT PUMP**

D299,516 S * 1/1989 Wang D23/200
D331,226 S * 11/1992 Austin D13/168
5,567,130 A * 10/1996 Kvinge F04B 53/16
417/393

(71) Applicant: **Graco Minnesota Inc.**, Minneapolis, MN (US)

(Continued)

(72) Inventors: **Brian W. Koehn**, Minneapolis, MN (US); **Bradley H. Hines**, Andover, MN (US); **Jacob D. Higgins**, White Bear Township, MN (US); **Paul W. Scheierl**, Chisago City, MN (US)

FOREIGN PATENT DOCUMENTS

WO 2021202689 A1 10/2021

OTHER PUBLICATIONS

Aro, $\frac{3}{8}$ " Air Double Diaphragm Pump 10.6 GPM 180F, (first available Nov. 1, 2014), Amazon.com, URL:<<https://www.amazon.com/Double-Diaphragm-Pump-10-6-180F/dp/B071VVK84G>> (Year: 2014).*

(Continued)

(**) Term: **15 Years**

(21) Appl. No.: **29/826,431**

(22) Filed: **Feb. 11, 2022**

(51) **LOC (14) Cl.** **15-02**

(52) **U.S. Cl.**
USPC **D15/7; D13/162**

(58) **Field of Classification Search**
USPC D23/206, 213, 214, 421; D10/49;
D13/110, 122–124, 159, 162, 166;
D15/6, 7–9.1

CPC F04B 1/005; F04B 39/0061; F04B 43/073;
F04B 43/0736; F04B 43/0009; F04B
43/06; F04B 43/026; F04B 45/04; F04B
45/041; F04B 45/043; F04B 45/045;
F04B 45/047; F04B 45/0536; F04B
53/16; F04B 53/22; F04B 17/03

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

2,739,536 A * 3/1956 Schaefer F04D 9/007
318/482
D257,973 S * 1/1981 Reid D13/126
4,401,412 A * 8/1983 Salina F04D 9/007
417/63

Primary Examiner — Calvin E Vansant

Assistant Examiner — Mark T. Philipps

(74) *Attorney, Agent, or Firm* — Kinney & Lange, P. A.

(57) **CLAIM**

The ornamental design for a control box for a displacement pump, as shown and described.

DESCRIPTION

FIG. 1 is a first isometric view of a control box for a displacement pump;

FIG. 2 is a second isometric view of the control box;

FIG. 3 is a third isometric view of the control box;

FIG. 4 is a fourth isometric view of the control box;

FIG. 5 is a top plan view of the control box;

FIG. 6 is a bottom plan view of the control box;

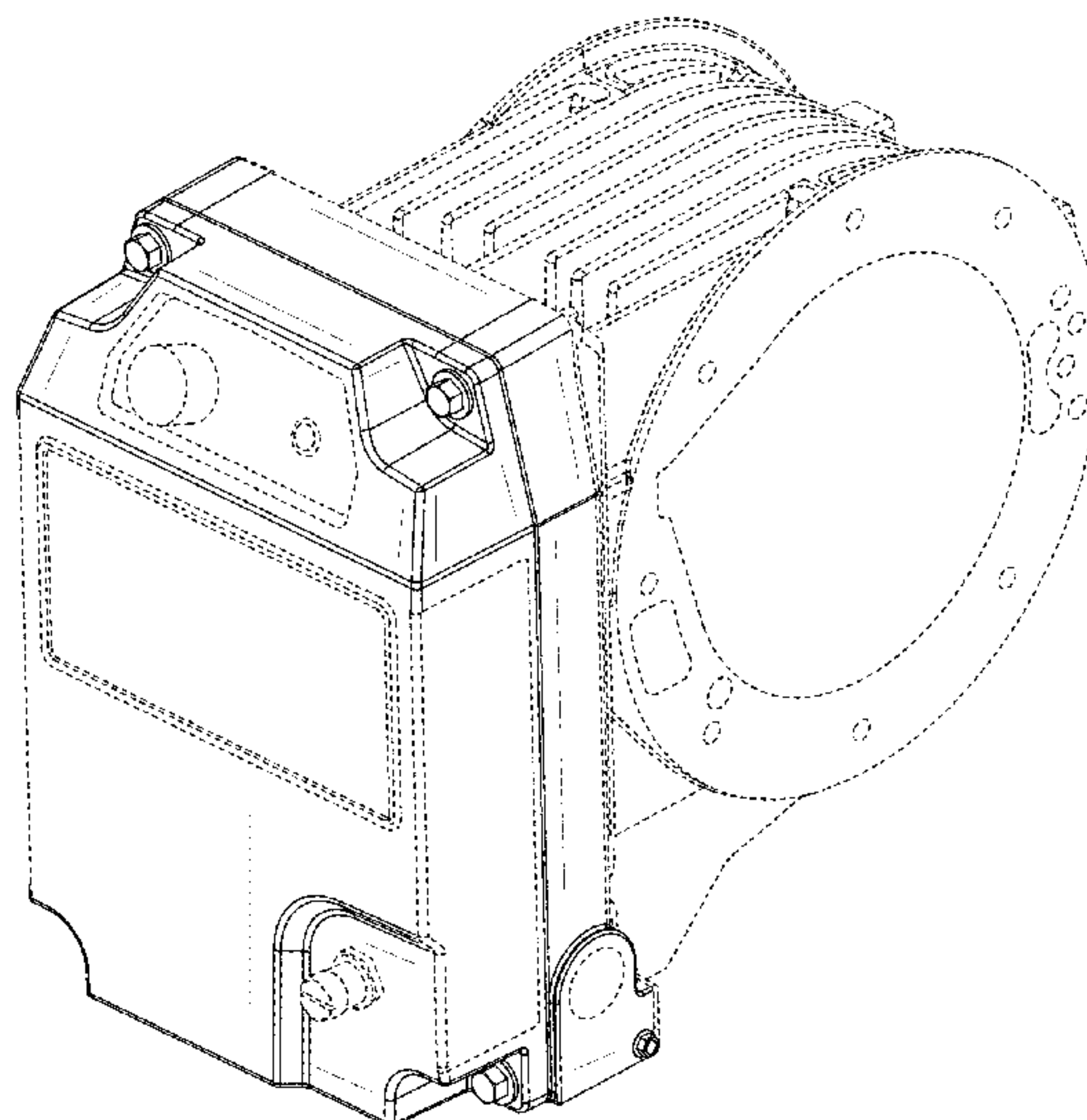
FIG. 7 is a front elevational view of the control box;

FIG. 8 is a left side view of the control box; and,

FIG. 9 is a right side view of the control box.

The broken lines in the Figures are represent portions of a control box for a displacement pump and of a displacement pump and form no part of the claimed design.

1 Claim, 7 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

D382,277 S * 8/1997 Feitel D15/7
D382,941 S * 8/1997 Nortier D23/303
D388,796 S * 1/1998 Conti D15/7
5,860,794 A * 1/1999 Hand F04B 53/16
91/286
6,099,325 A * 8/2000 Parkhill H01R 13/52
439/76.1
D466,486 S * 12/2002 Gillingham D13/184
D484,145 S * 12/2003 Roberts D15/7
D507,976 S * 8/2005 Roher D10/50
7,163,381 B1 * 1/2007 Barak F04B 43/082
417/44.11
D574,738 S * 8/2008 Khurana D10/49
D638,858 S * 5/2011 Johnson D15/7
D667,465 S * 9/2012 Headley D15/7
D674,815 S * 1/2013 Headley D15/7
D682,316 S * 5/2013 Rogne D15/7
D696,696 S * 12/2013 Sofussen D15/7
D699,264 S * 2/2014 Sofussen D15/7
D725,505 S * 3/2015 Arensmeier D10/49
9,028,224 B2 * 5/2015 Headley F04B 43/0736
137/625.25
D746,873 S * 1/2016 Davis D15/7
D746,874 S * 1/2016 Davis D15/7
D781,923 S * 3/2017 Suwabe D15/7
D781,924 S * 3/2017 Araki D15/7
D817,360 S * 5/2018 Dietzsch D15/7
D822,067 S * 7/2018 Hines D15/7
D861,043 S * 9/2019 Suwabe F02M 37/04
D15/7
D861,593 S * 10/2019 Nakajima D13/103
10,823,167 B2 * 11/2020 Dietzsch F04B 39/14
D910,163 S * 2/2021 Alizoti A61B 5/097
D24/110

D952,692 S * 5/2022 Iwai F02M 37/04
D15/7
D977,438 S * 2/2023 Huang D13/160
11,655,810 B2 * 5/2023 Hines F04B 9/02
417/42
2006/0078444 A1 * 4/2006 Sacher F04D 29/5813
417/32
2013/0078125 A1 * 3/2013 Headley F04B 43/026
417/521
2013/0101445 A1 * 4/2013 Schutze F04B 43/073
417/395
2014/0199188 A1 * 7/2014 Treml F04B 43/0736
73/866.5
2016/0201663 A1 * 7/2016 Treml F04B 39/0061
417/63
2021/0190065 A1 * 6/2021 Ferden F04B 51/00
2021/0301809 A1 * 9/2021 Hines F04B 1/02

OTHER PUBLICATIONS

Roughneck, Air-Operated Double Diaphragm Pump, (first available Jul. 27, 2018), Amazon.com, URL:<<https://www.amazon.com/Roughneck-Air-Operated-Double-Diaphragm-Pump/dp/B07JH3BX3C>> (Year: 2018).*

Graco, Husky 1050 Series Air-Operated Double Diaphragm Transfer Pump for Oil, (first available Mar. 23, 2021), Amazon.com, URL:<<https://www.amazon.com/GRACO-647731-Husky-Diaphragm-Transfer/dp/B07BVML9TG>> (Year: 2021).*

Andy Soukup, “Graco Quantm EODD FAQ—Answering your questions about Quantm”, (posted Dec. 9, 2022), Triplex Blog, URL:<<https://triplexblog.com/2022/12/09/graco-quantm-eodd-faq-answering-your-questions-about-quantm/>> (Year: 2022).*

First Chinese Office Action for CN Application No. 2022305203135, dated Jul. 18, 2023, pp. 1.

* cited by examiner

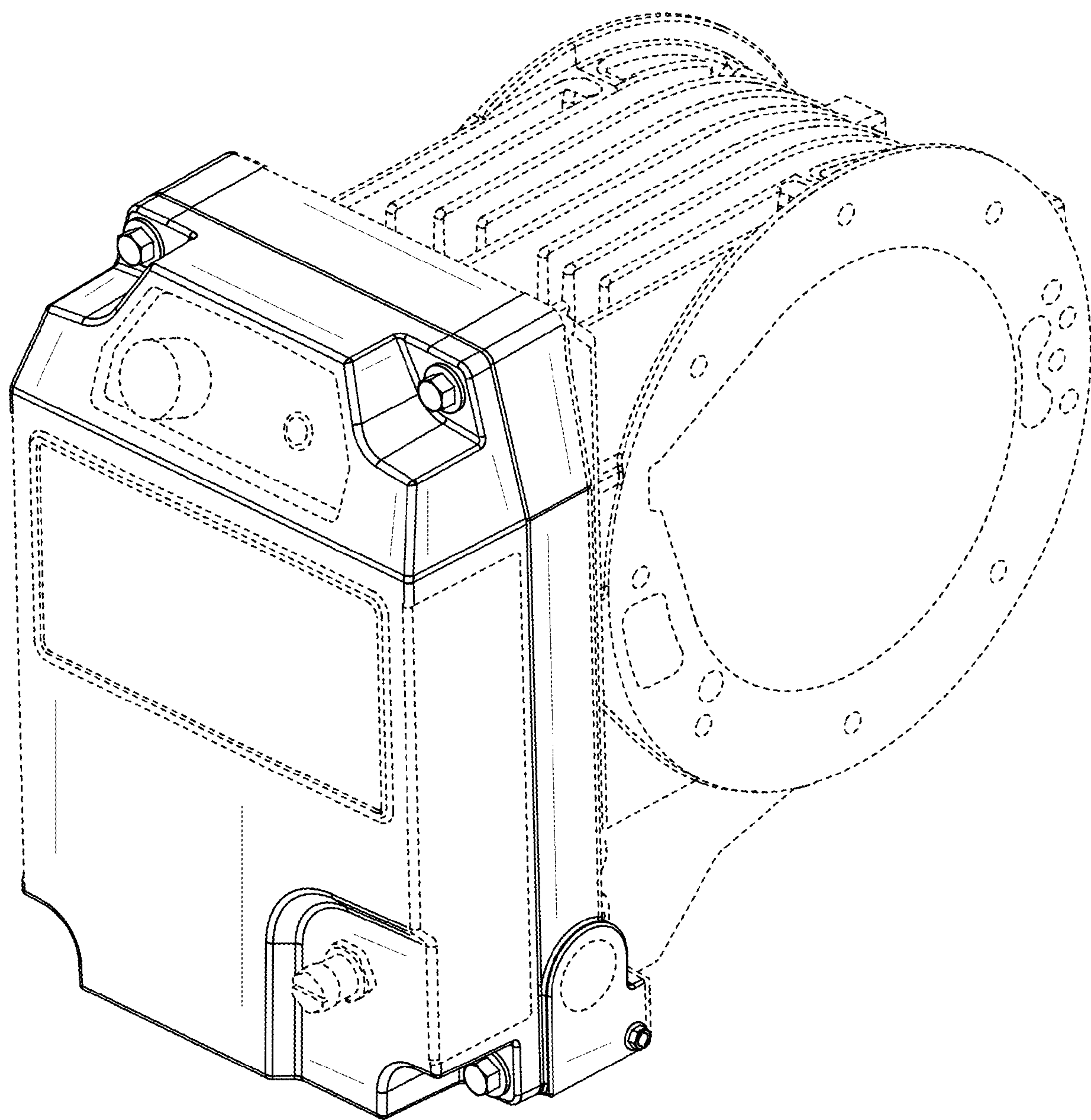


Fig. 1

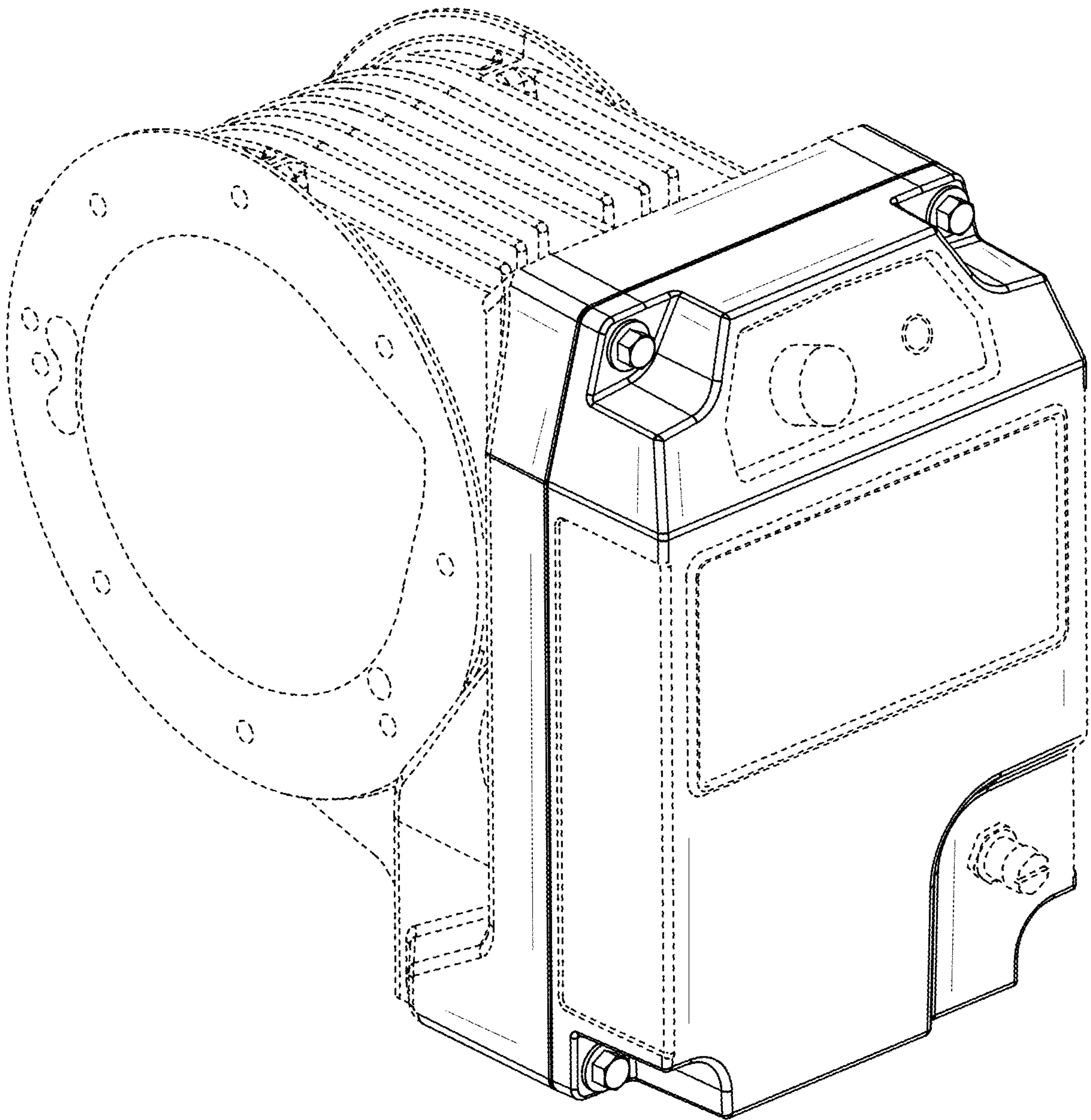


Fig. 2

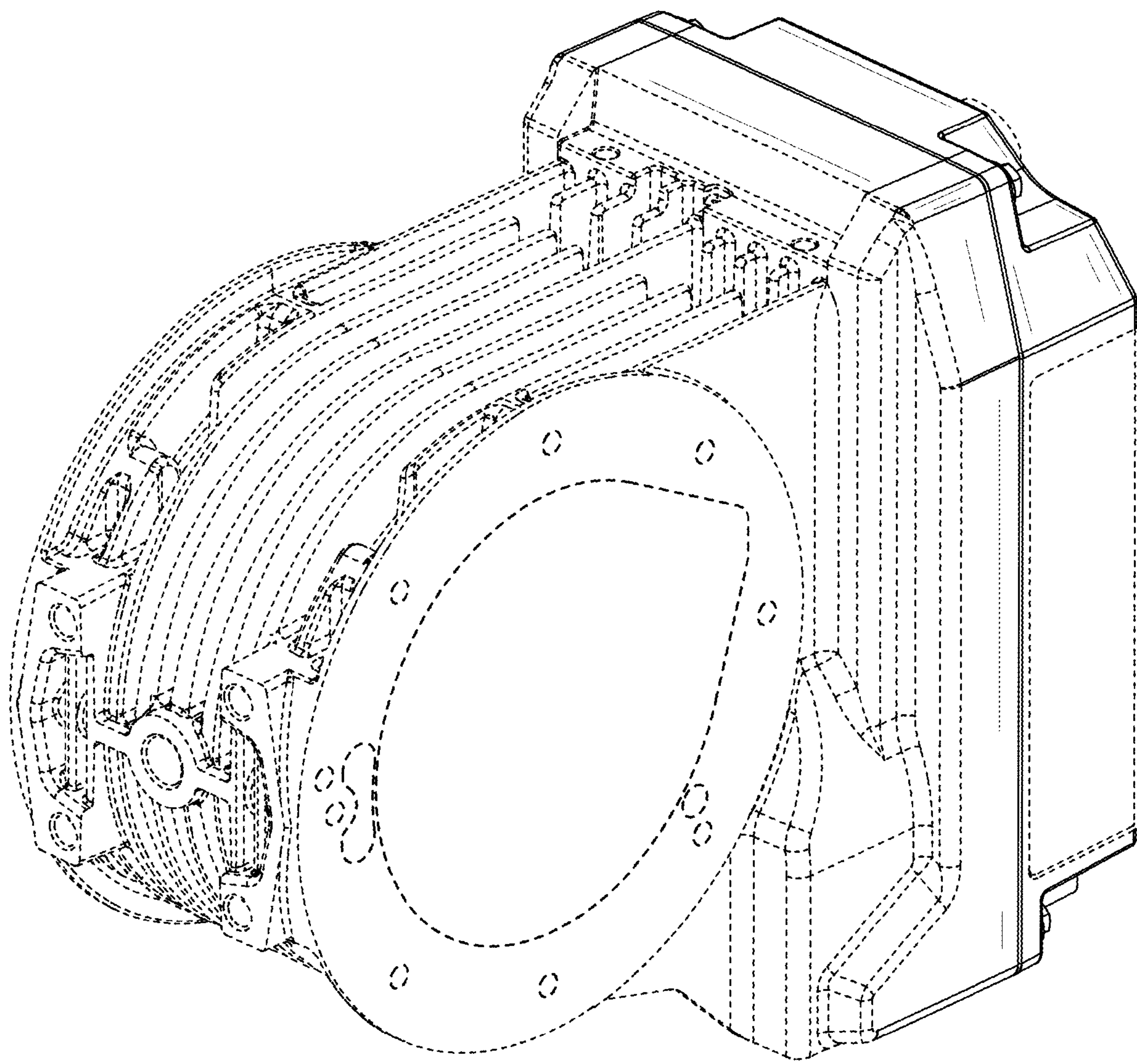


Fig. 3

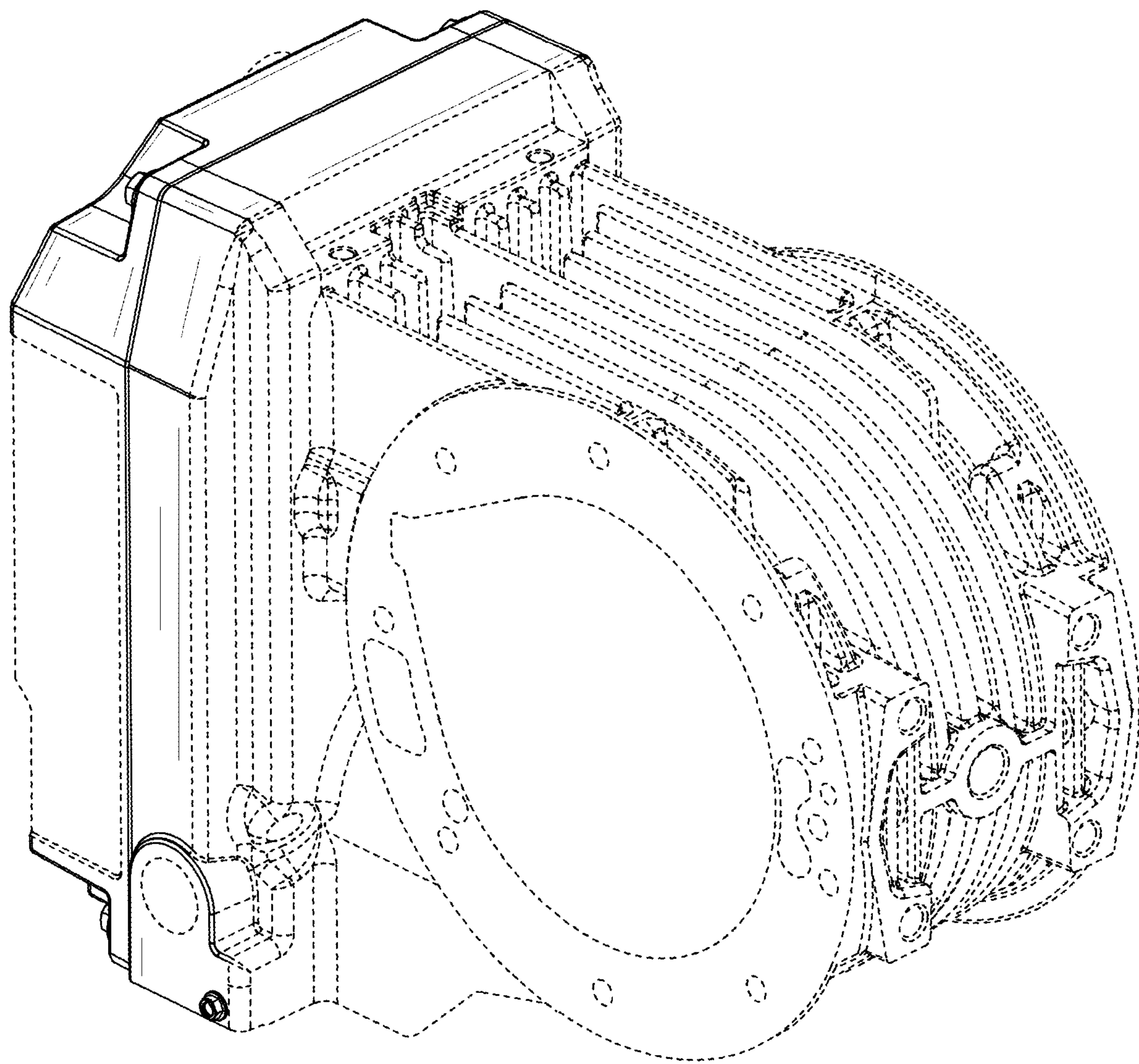


Fig. 4

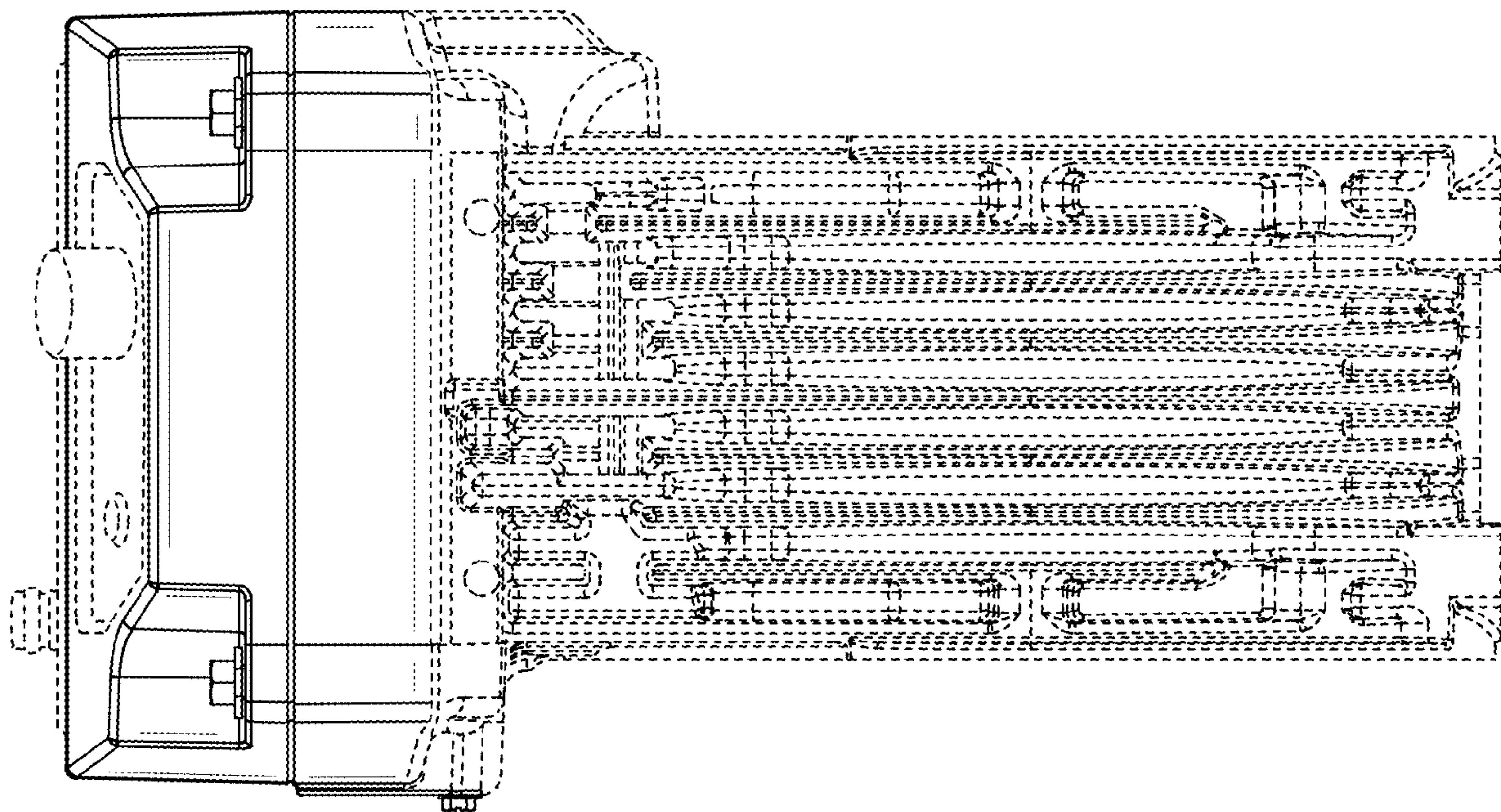


Fig. 5

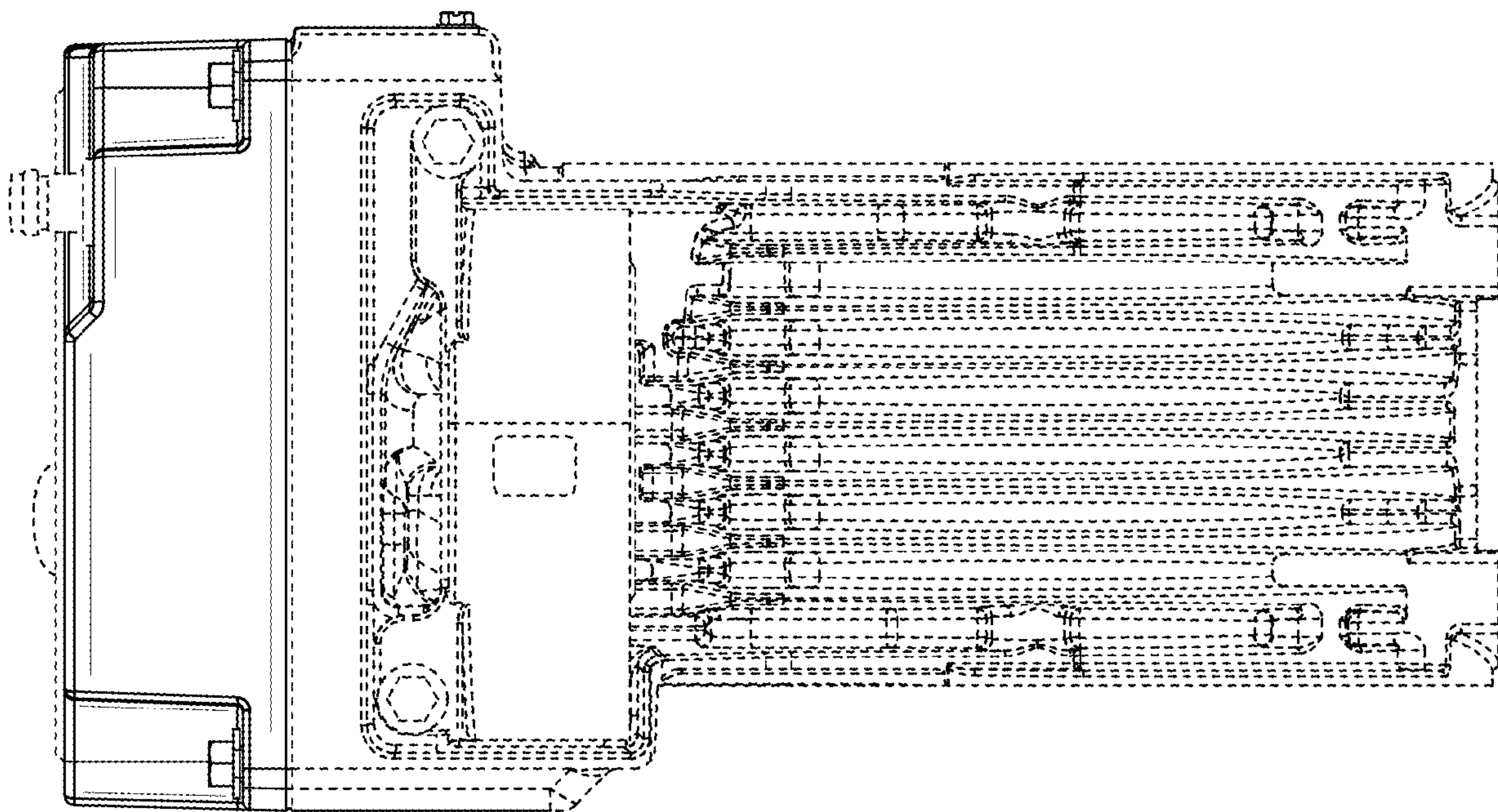


Fig. 6

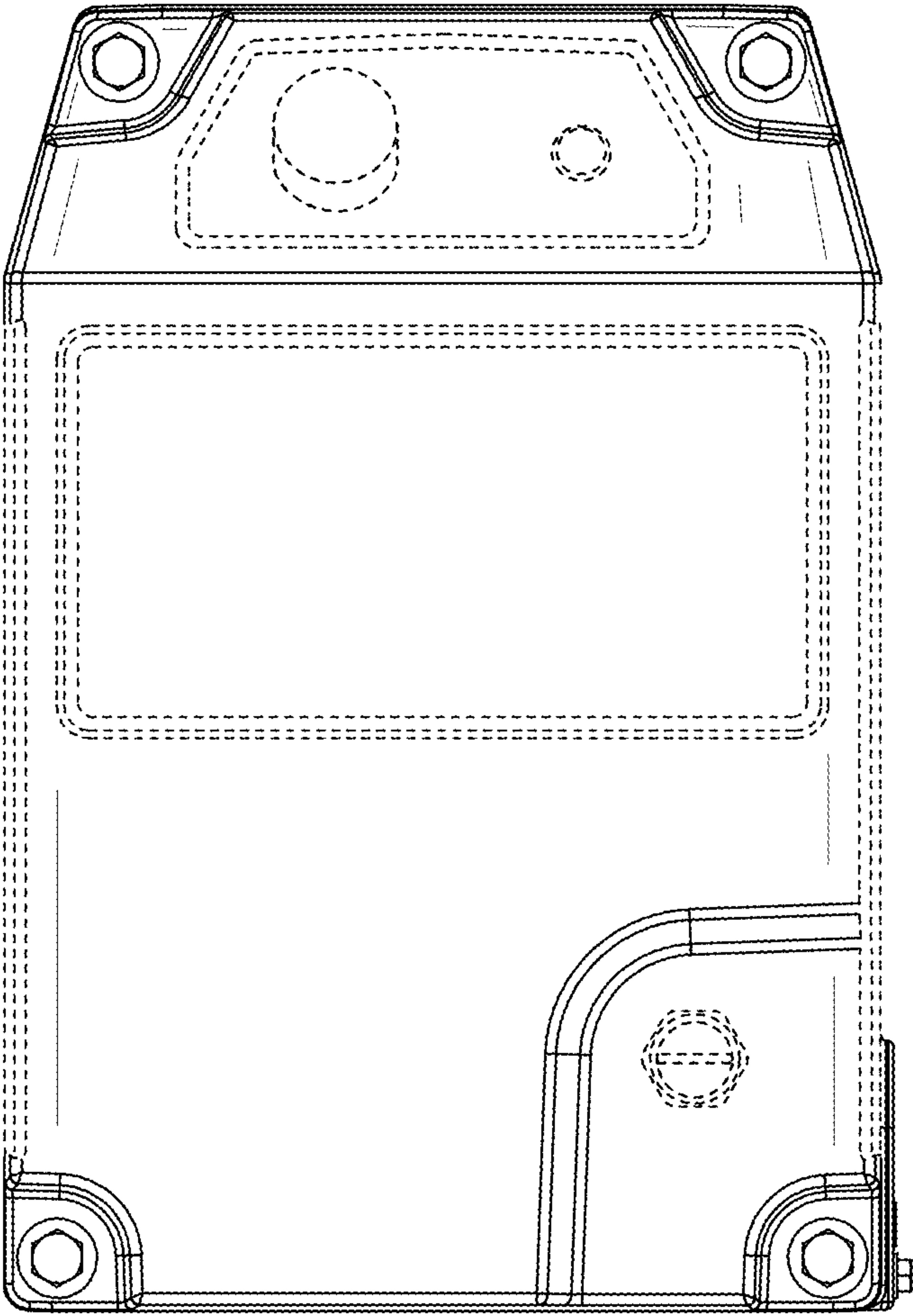


Fig. 7

