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(12) **United States Design Patent**
Guo et al.

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(54) **HYDRAULIC PUMP**

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

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(30) **Foreign Application Priority Data**

Oct. 22, 2018 (CN) 201830589294.5

(51) **LOC (13) Cl.** **15-02**

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

(58) **Field of Classification Search**

USPC D15/7, 9, 143, 148-149, 199; D23/225, D23/231-233, 235

CPC F15B 15/16; F15B 15/26; F15B 15/1414; F15B 15/1919; F15B 15/14; F15B 15/00; F15B 15/08; F15B 15/18; F15B 15/20; F02M 37/04; F04D 29/4286

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

D495,342 S * 8/2004 Tojo D15/7
D613,765 S * 4/2010 Reverberi D15/5

D613,766 S * 4/2010 Reverberi D15/5
D613,770 S * 4/2010 Kitamura D15/7
D688,273 S * 8/2013 Magri D15/7
D786,309 S * 5/2017 Meyer D15/7
9,677,548 B2 * 6/2017 Paderni F16J 15/002
D805,557 S * 12/2017 Lanevongsa D15/7
D823,898 S * 7/2018 Alexander D15/7
D823,900 S * 7/2018 Alexander D15/7
10,316,832 B2 * 6/2019 Byrne F16D 57/002
D858,582 S * 9/2019 Shibazaki D15/7
D886,870 S * 6/2020 Alexander D15/7
D914,061 S * 3/2021 Del Aguila D15/7

(Continued)

OTHER PUBLICATIONS

Danfoss, Open Circuit Axial Piston Pumps, (site visited Sep. 30, 2021), Danfoos.com website, URL:<https://www.danfoss.com/en-us/products/dps/pumps/hydrostatic-pumps/open-circuit-axial-piston-pumps/#tab-overview> (Year: 2021).*

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(57) **CLAIM**

The ornamental design for a hydraulic pump, substantially as shown and described.

DESCRIPTION

FIG. 1 is a rear, right side and top perspective view of a hydraulic pump comprising a new, original and ornamental design;

FIG. 2 is a front view thereof;

FIG. 3 is a rear view thereof;

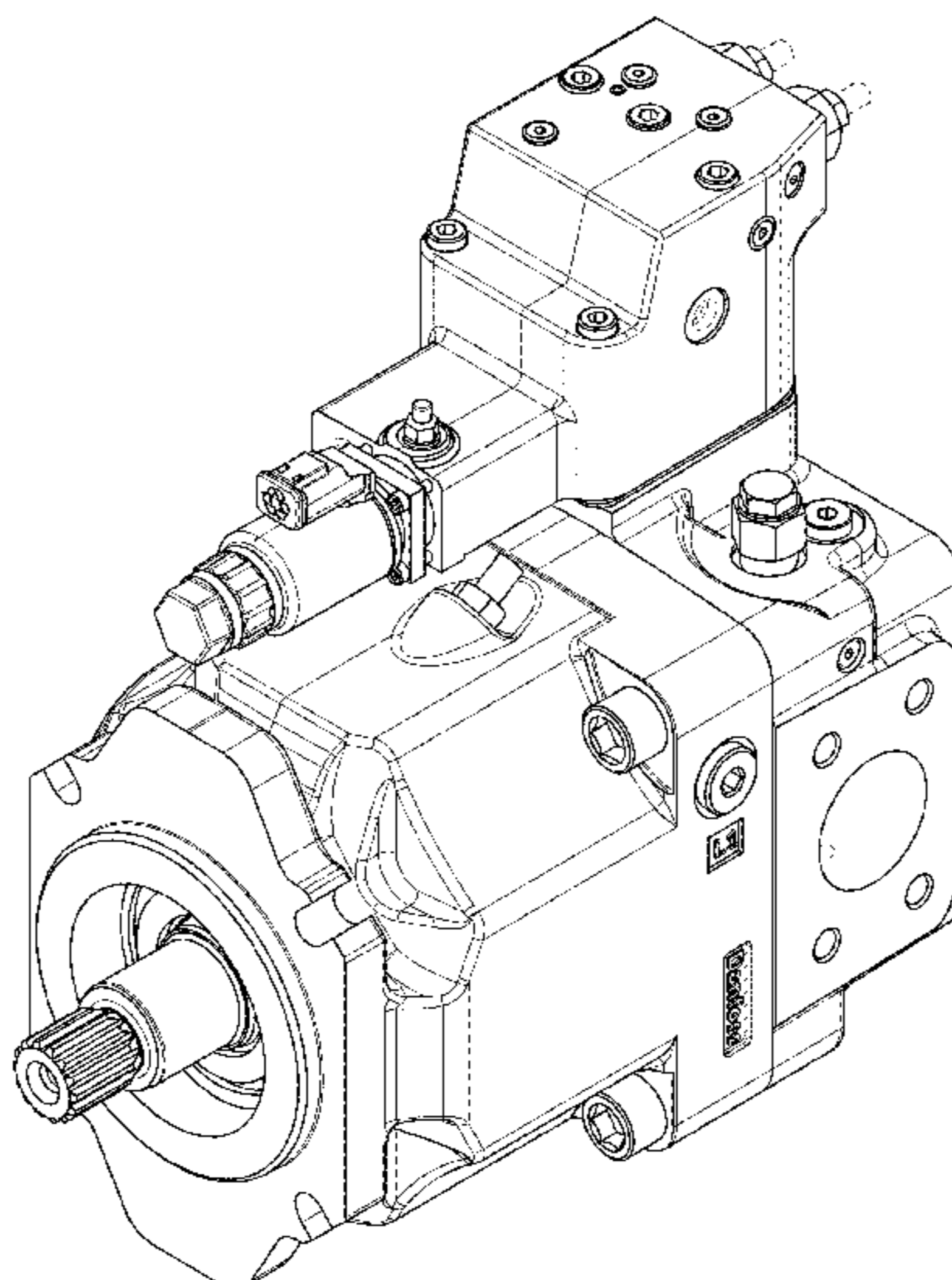
FIG. 4 is a left side view thereof;

FIG. 5 is a right side view thereof;

FIG. 6 is a top view thereof; and,

FIG. 7 is a bottom view thereof.

1 Claim, 7 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

2016/0348654 A1* 12/2016 Yasuda F04B 27/22
2020/0256326 A1* 8/2020 Kharpas F04B 1/324

* cited by examiner

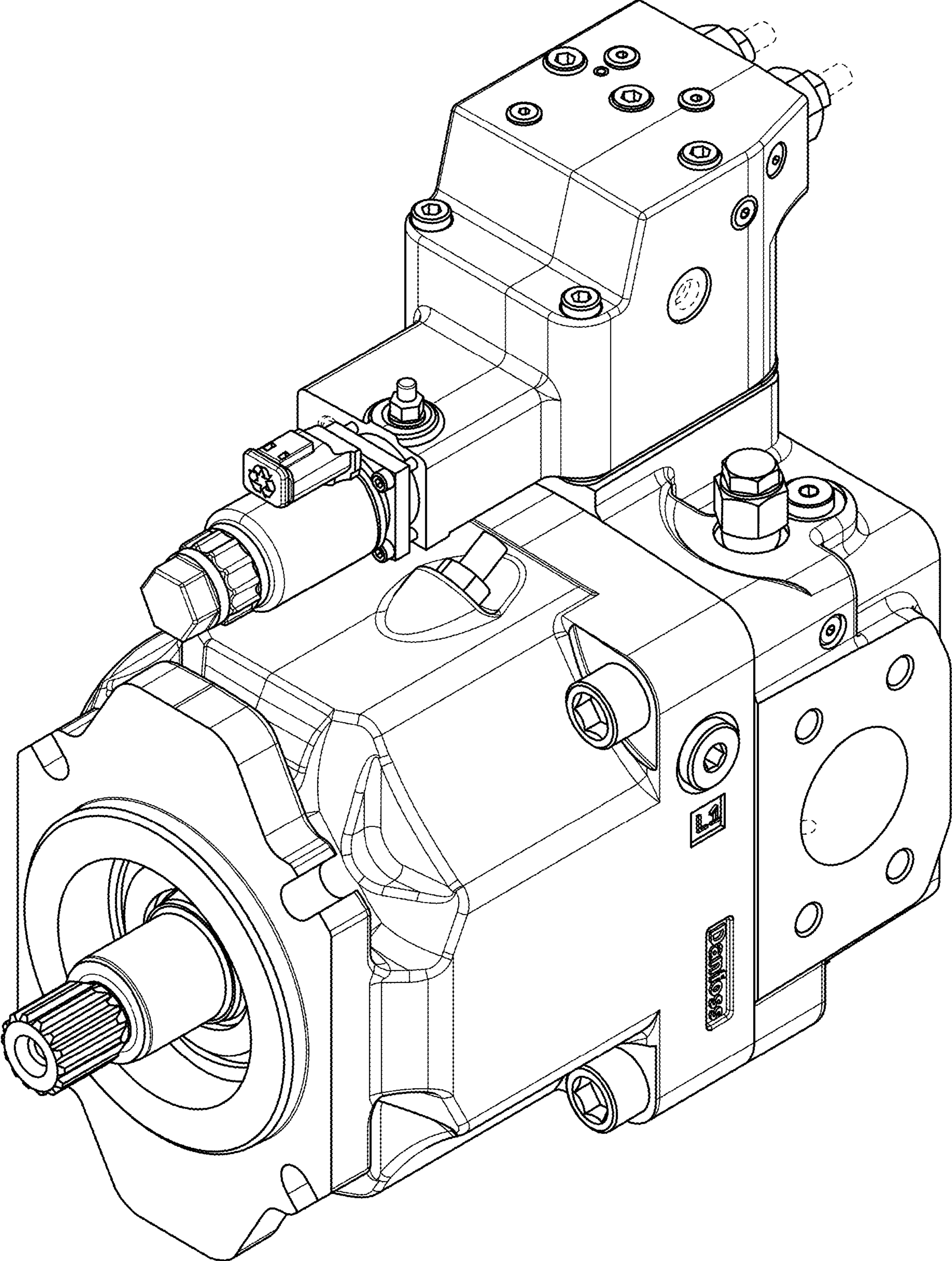


FIG. 1

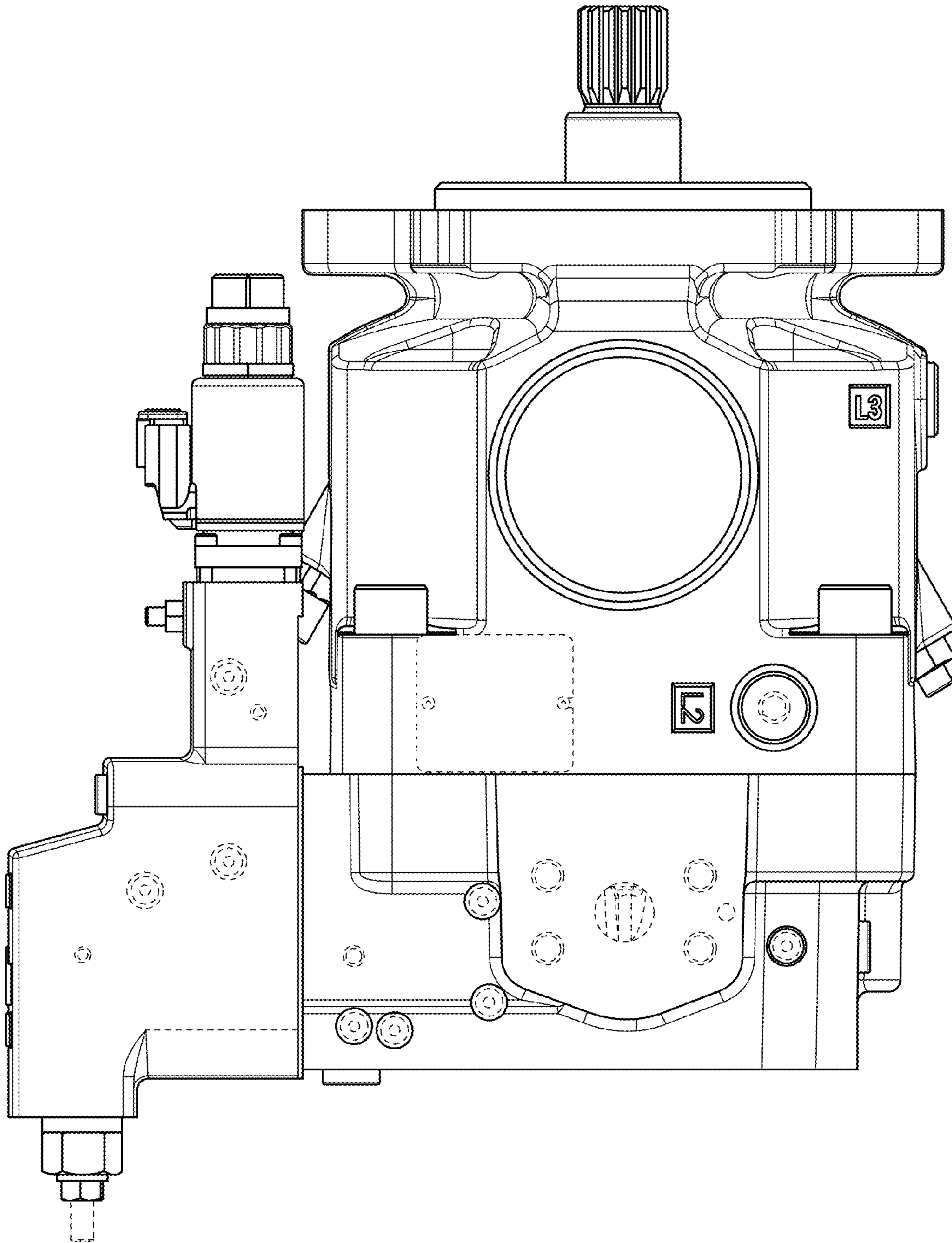


FIG. 2

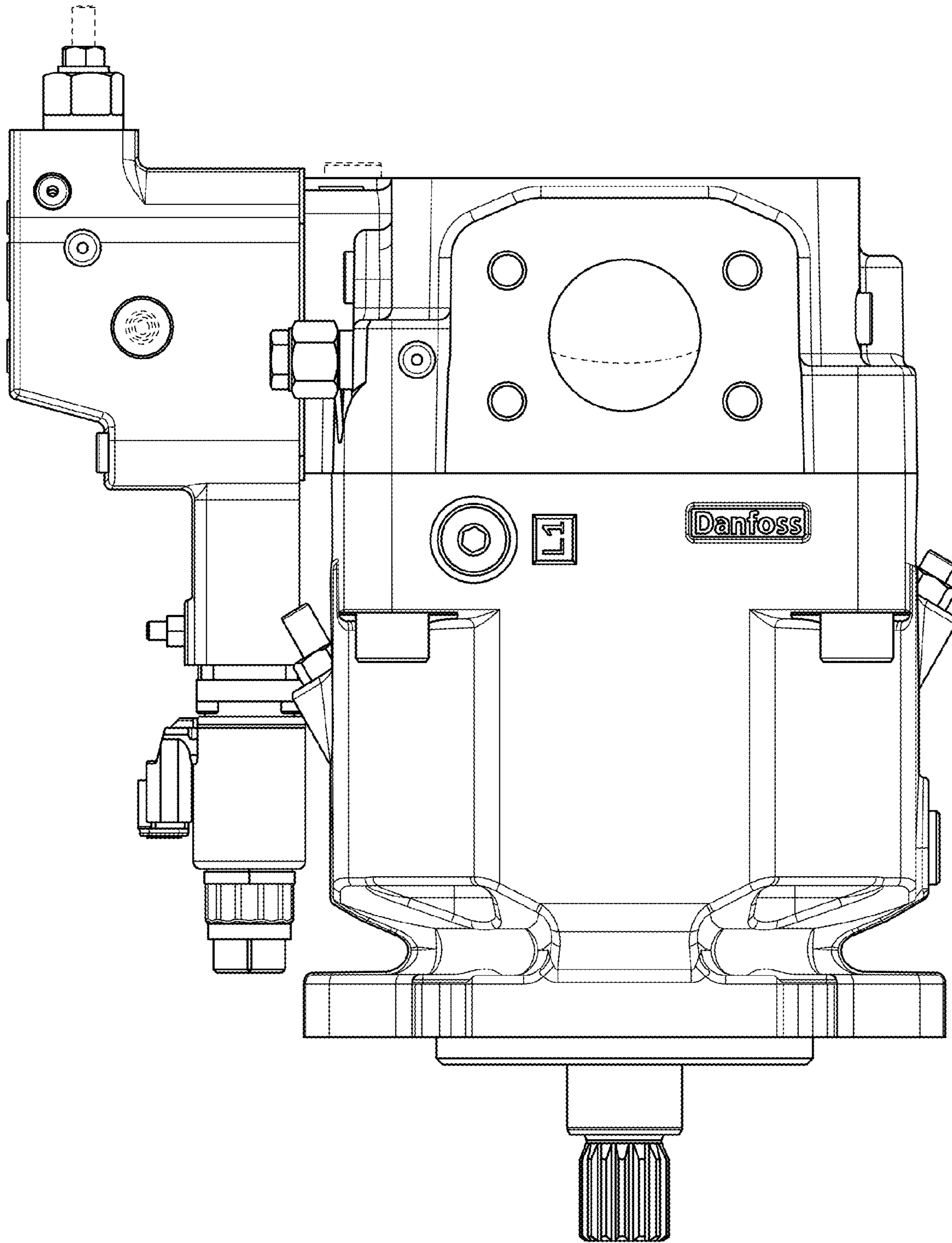


FIG. 3

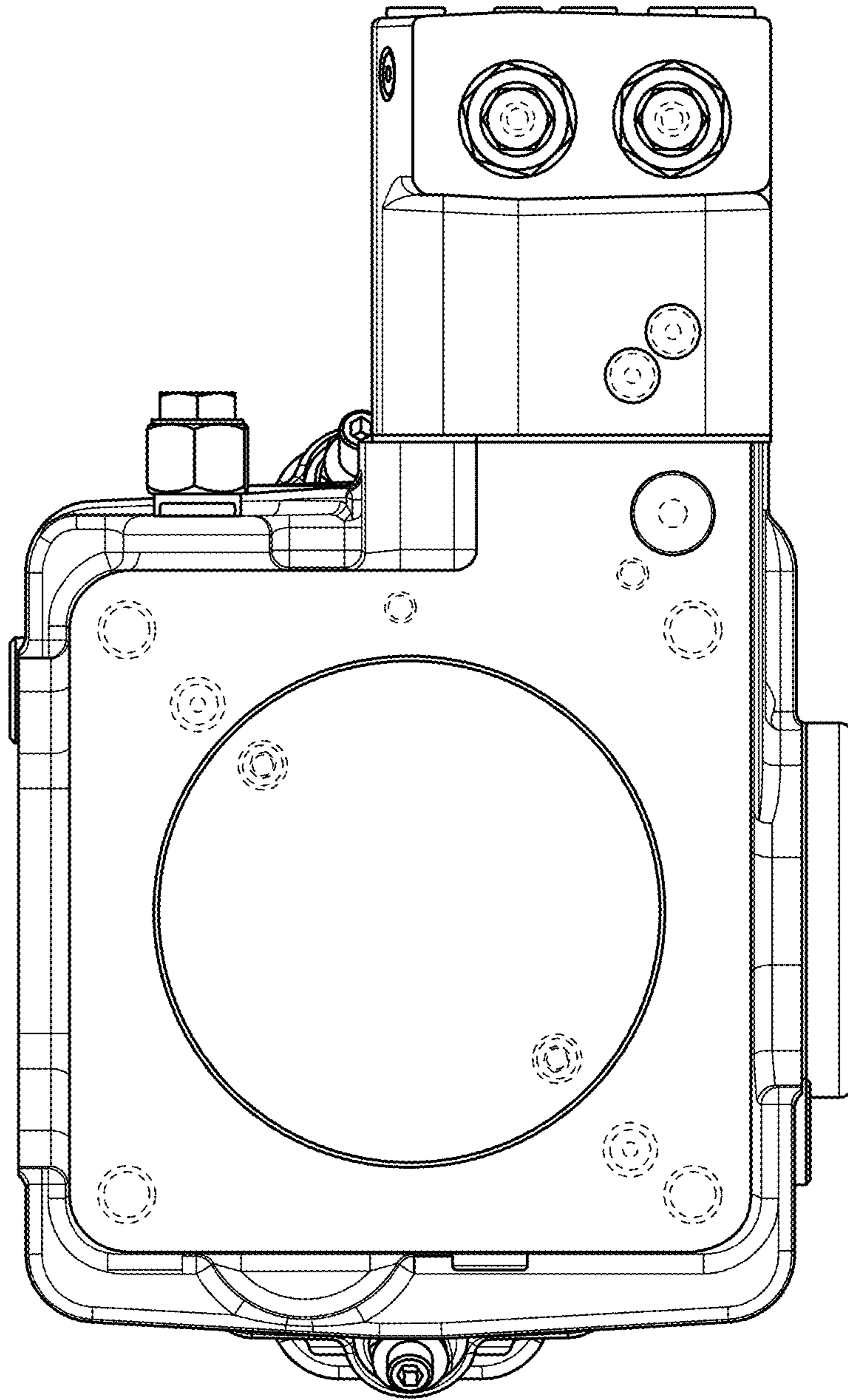


FIG. 4

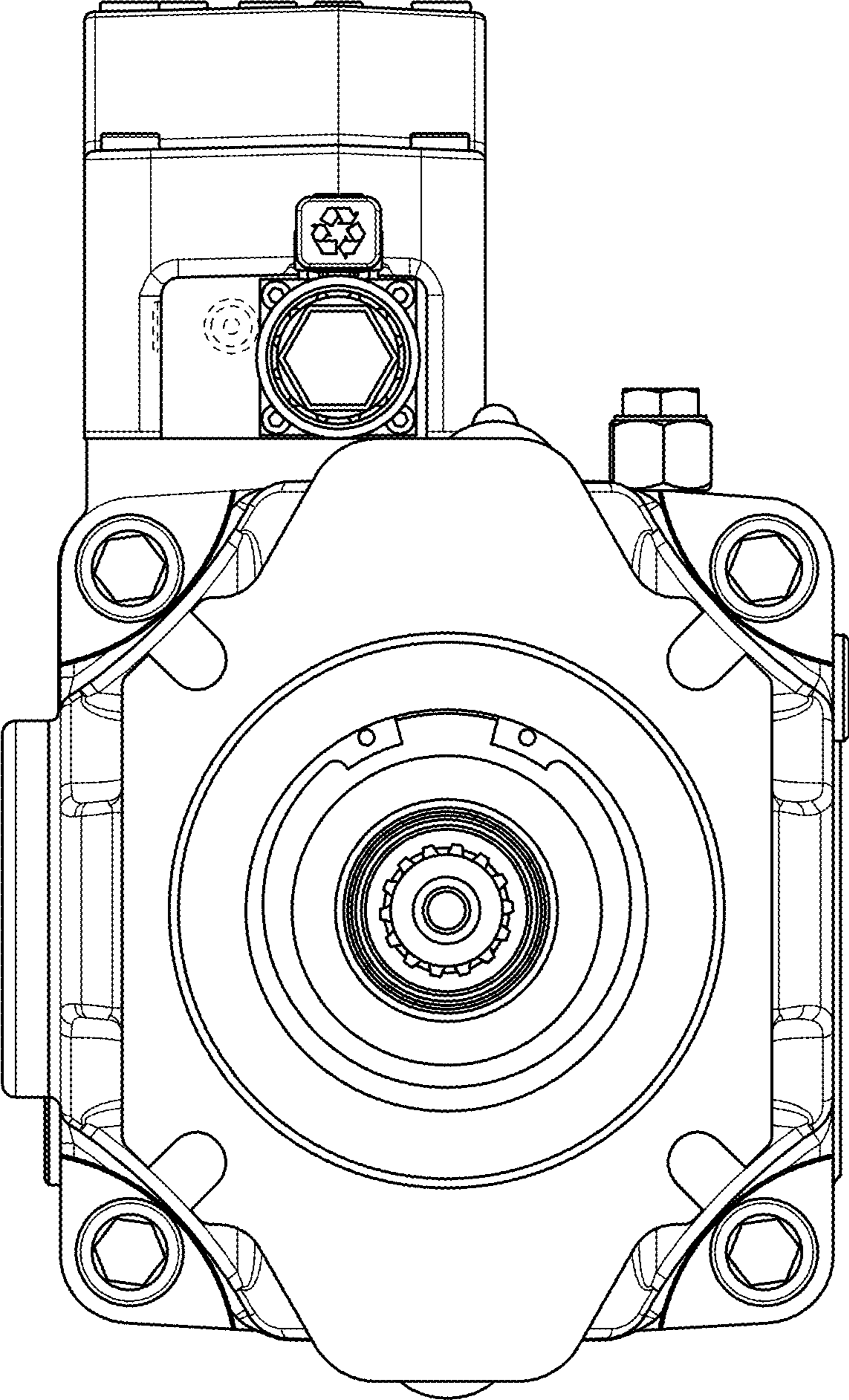


FIG. 5

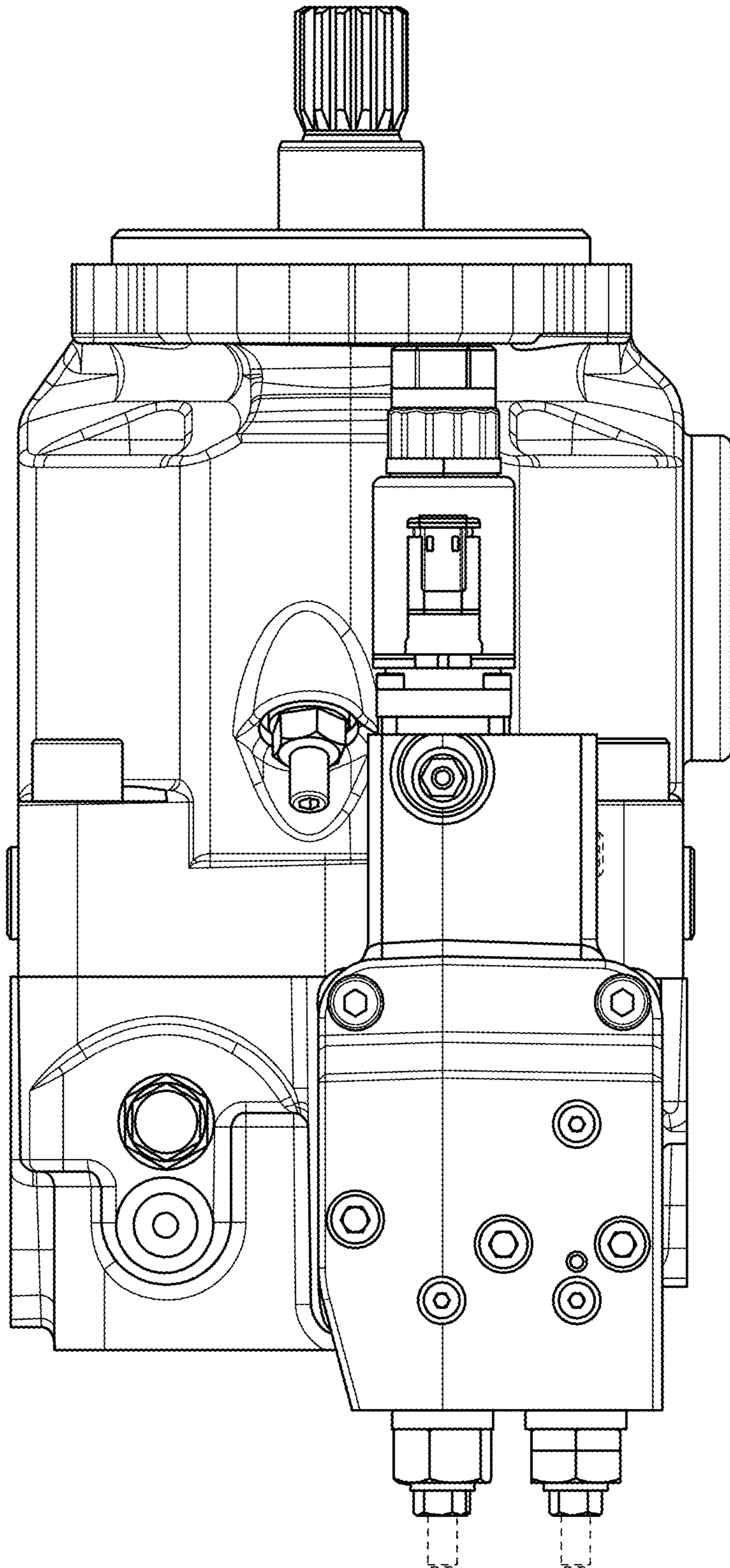


FIG. 6

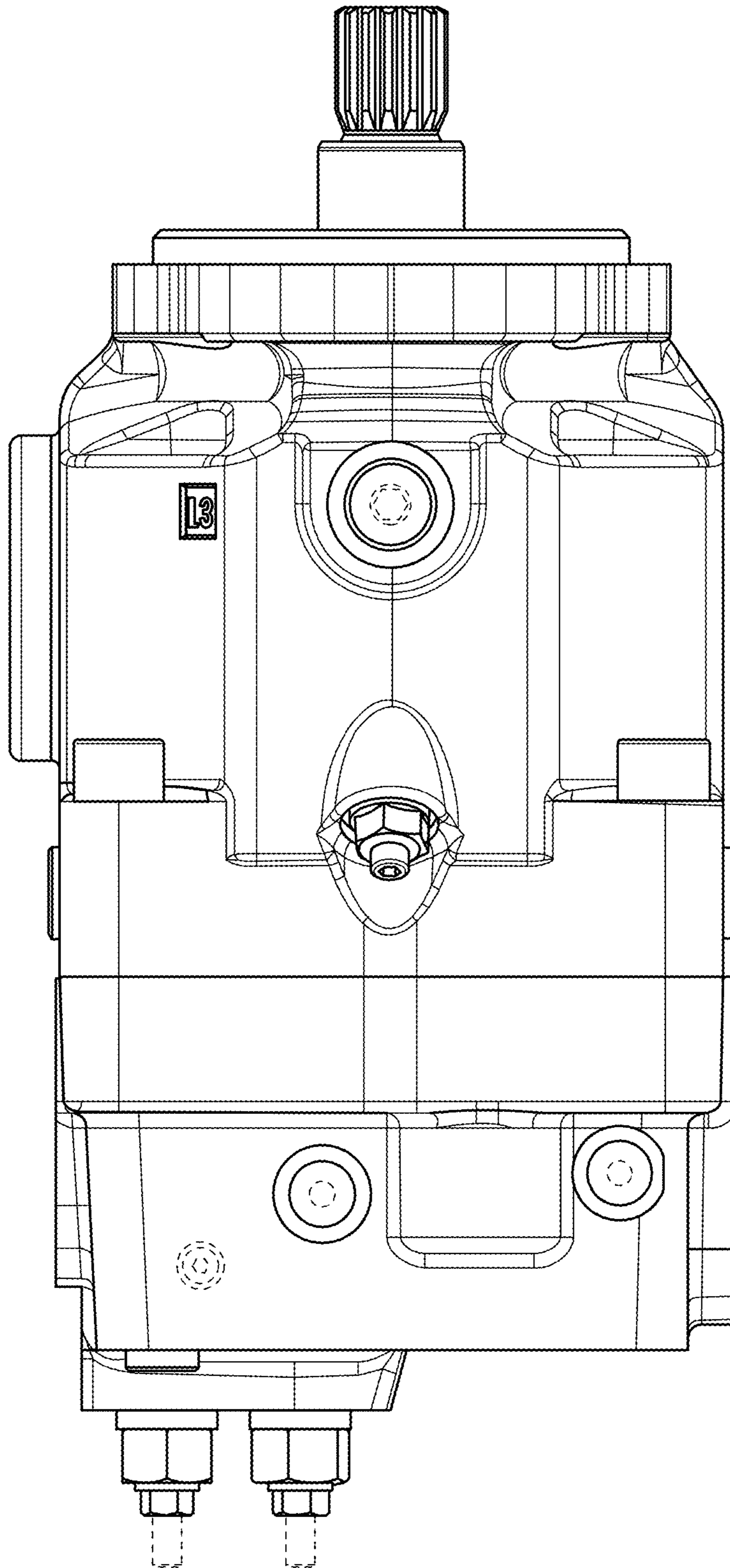


FIG. 7