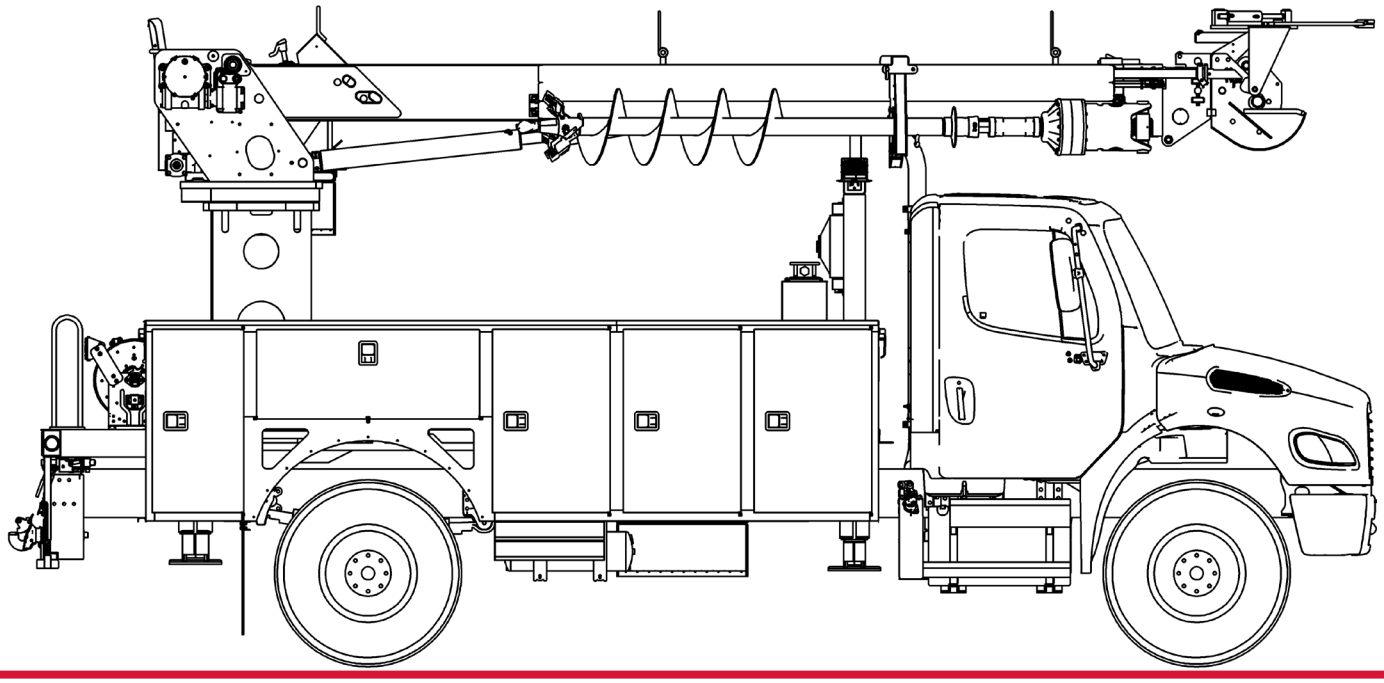
TEREX

TECH TIPS

SETTING RELIEF AND HYDRAULIC OVERLOAD PROTECTION PRESSURES ON UNITS WITH X-BOOST OPTION

NO. 37



SERVICE CALL:

SETTING RELIEF AND HYDRAULIC OVERLOAD PROTECTION PRESSURES ON UNITS WITH X-BOOST OPTION

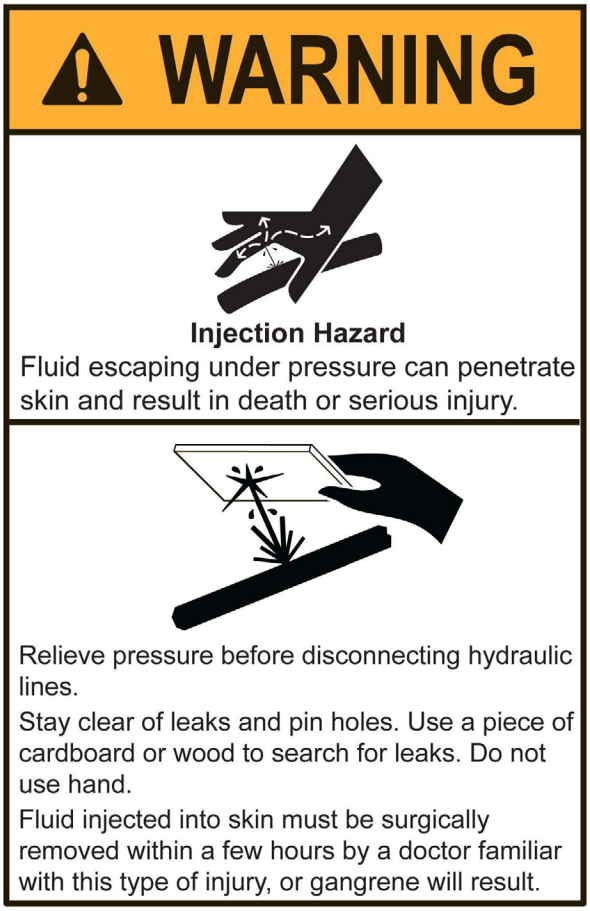
MODEL(S):

C4000, C5000, C6000, C7000, AND GENERAL

TOOLS NEEDED:

1/2", 9/16", 3/4", 1" WRENCHES
¼ ALLEN WRENCH, ¼ JIC PLUG
0-5000 PSI PRESSURE GAUGE

TEREX UTILITIES TECHNICAL SUPPORT TEAM
PHONE: 1-844-TEREX4U (1-844-837-3948) | EMAIL: UTILITIES.SERVICE@TEREX.COM



DANGER

Failure to obey the instructions and safety rules in the appropriate Operator's Manual and Service Manual for your machine will result in death or serious injury.

Many of the hazards identified in the Operator's Manual are also safety hazards when maintenance and repair procedures are performed.

DO NOT PERFORM MAINTENANCE UNLESS:

√ You are trained and qualified to perform maintenance on this machine.

√ You read, understand and obey:

- manufacturer's instructions and safety rules
- employer's safety rules and worksite regulations
- applicable governmental regulations

√ You have the appropriate tools, lifting equipment and a suitable workshop.

The information contained in this Tech Tip is a supplement to the Service Manual. Consult the appropriate Service Manual of your machine for safety rules and hazards.

TEREX®

TECH TIP 37 | RELEASED 04.16.2025 | VERSION 1.2

©TEREX UTILITIES. ALL RIGHTS RESERVED

CONTENTS

TECH TIP#37

TOC

4 | *Determine gauge installation location*

INTRODUCTION
STEP 1

6 | *Install gauge*
| *Bring oil to operating temperature*
| *Verify coils*

STEP 2 - STEP 5

7 | *Raise boom to full elevation*

STEP 6

8 | *Check pressure when HOP dumps*

STEP 7 - STEP 12

INTRODUCTION

Repair procedures shall be completed by a person trained and qualified on the repair of this machine.

Immediately tag and remove from service a damaged or malfunctioning machine.

Read this procedure completely and adhere to the instructions. Attempting shortcuts may produce hazardous conditions.

The X-Boost option is a system that allows increased lifting capacity when the boom is above 50 degrees.

By adding a boom angle sensor to the bottom of the main boom to activate when the boom is above 50 degrees, the lift cylinder pressure can be increased resulting in an increase in lifting capacity.

When the boom angle is below 50 degrees, the sensor on the bottom of the boom is not activated and this will allow the system to operate at normal system pressure.

The Hydraulic Overload Protection is controlled in the same manner to prevent overloading when the unit is above or below 50 degrees.

STEP 1

Determine gauge installation location:

Note: All settings for this Tech Tip will be made using a gauge installed on the G1 port on the manifold shown in **FIGURE 1** - 608487 Dual HOP Manifold Cartridges. Verify all adjustments at highest throttle setting.

Refer to **FIGURE 2** for the following.

Boom HOP (2 settings):

1. PS3 Refer to **CHART 1**
2. PS2 Refer to **CHART 1**

Rotation Hop Adjustment: refer to Tech-tip #12 to adjust PS1.

The function of Solenoid: (S3) is used to block PS3 HOP cartridge.

The function of Solenoid: (S2) Will shift the digger speed.

The function of Solenoid: (S1) Will allow the release of the auger from the storage bracket.

- Use port G1 on HOP manifold for Boom HOP
- Use port G2 on HOP manifold for Rotation HOP. Refer to tech tip #12

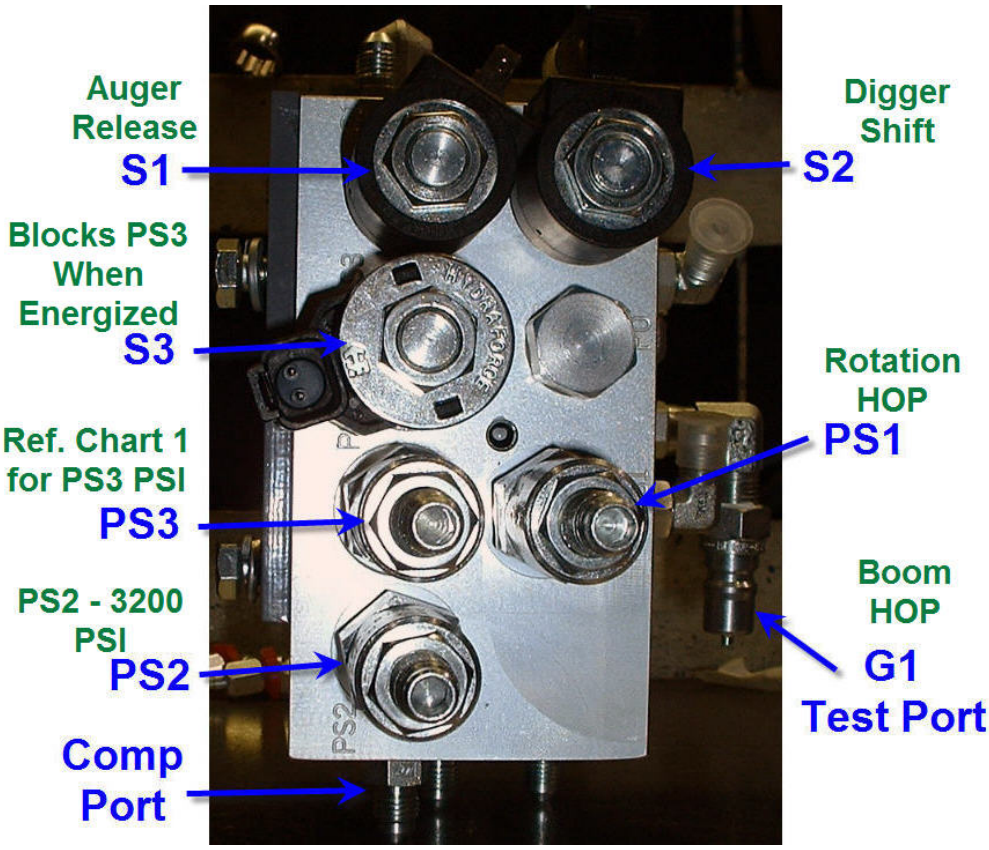


FIGURE 1

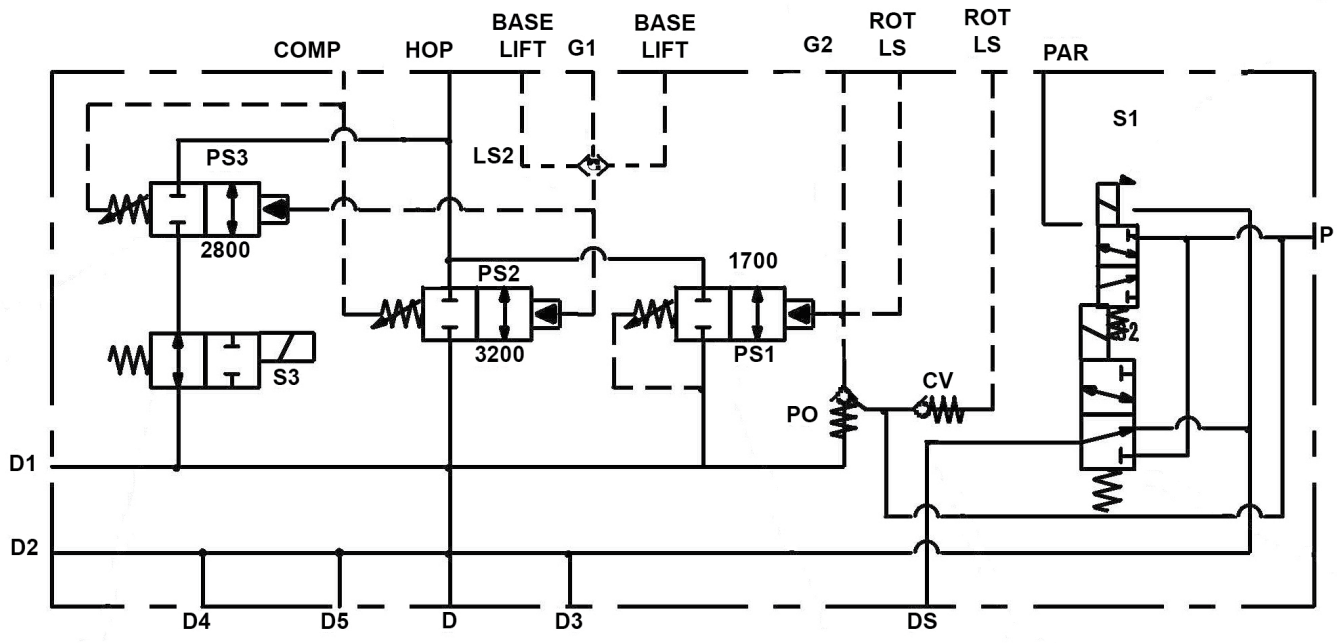
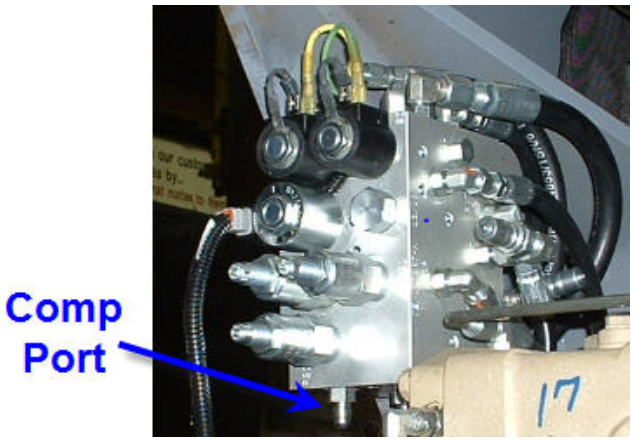


FIGURE 2 - 608487 Dual HOP Manifold Schematic

STEP 2

Disconnect ¼" hose from the rod side of lift cylinder to the compensator on HOP manifold and plug with a ¼" JIC plug. Leave the #4 male JIC fitting in comp port on the manifold open to atmosphere.



Escaping fluid under pressure can penetrate skin causing serious injury.

Relieve pressure before disconnecting hydraulic lines. Keep away from leaks and pin holes. Use a piece of cardboard or paper to search for leaks. DO NOT use your hand.

STEP 3

Install gauge in the location specified in step one. The boom must be supported by the boom rest or the lift cylinders must be fully retracted before attempting to install gauge.

STEP 4

Operate unit to bring hydraulic fluid to normal operating temperature.

STEP 5

Using a multi-meter, verify coils on solenoid S3 on HOP manifold and solenoid on Dual Pressure manifold have 12 volts when unit is at 50 degrees and above. (Adjust sensor on bottom of boom if necessary).

STEP 6

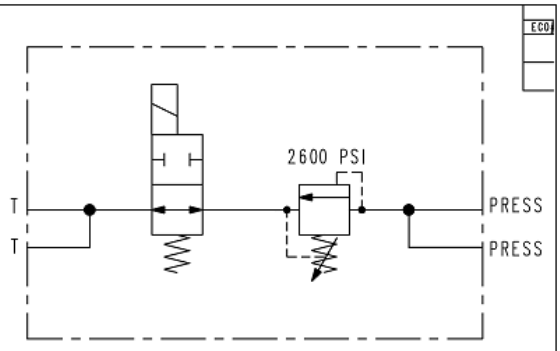
Raise boom to full elevation. Set throttle to maximum setting and engage lift up control.

Set existing system relief to 3000 psi when lift up is stalled.

Model	*Existing Relief Setting
C4000	3000 PSI
C5000	3000 PSI
C6000-7000	3000 PSI
General	3000 PSI

Disconnect power to solenoid on 608678 dual pressure manifold and set relief in this manifold to pressure listed in column 2 (item 2 pressure) on **CHART 1** for model being adjusted. Once completed, reconnect power to the solenoid.

(P/N 608678)



Model	Item 2 Pressure (P/N 608678)
C4000	2600 PSI
C5000	2600 PSI
C6000-7000	2500 PSI
General	2700 PSI

Model	Item 2 Pressure (P/N 608678)	*Existing Relief Setting	PS3 Cartridge	PS2 Cartridge
C4000	2600 PSI	3000 PSI	2800 PSI	3200 PSI
C5000	2600 PSI	3000 PSI	2800 PSI	3200 PSI
C6000-7000	2500 PSI	3000 PSI	2700 PSI	3200 PSI
General	2700 PSI	3000 PSI	2900 PSI	3200 PSI

All pressures are set using gage at G1 on HOP manifold.

***Note**: Existing relief is set to 3000 PSI; the new relief **(P/N 608678)** is set to the value of the existing relief (Item 2 Pressure)

CHART 1

STEP 7
Run boom up to 45 degrees and extend the second stage. Attach the load line to an object that the lift cylinders cannot pick up.

STEP 8
Winch up until HOP dumps and read pressure on gauge. Pressure reading is referenced on Chart 1 in PS3 column.

STEP 9
Adjust PS 3 CW to increase and CCW to decrease pressure, on HOP Manifold.

STEP 10
With the second stage fully extended, raise the boom to 55 degrees. Attach the load line to an object that the lift cylinders cannot pick up.

STEP 11
Winch up until HOP dumps and read pressure on gauge. Pressure reading is referenced on Chart 1 in PS2 column. This pressure is 3200 psi for all models

STEP 12
Tighten down jam nuts and verify settings, then reconnect ¼" hose from lift up to comp.

FOR FURTHER ASSISTANCE,
CONTACT THE TEREX UTILITIES TECHNICAL SUPPORT TEAM
PHONE: 1-844-TEREX4U (1-844-837-3948) | EMAIL: UTILITIES.SERVICE@TEREX.COM