



**UNITED  
TECHNOLOGIES  
CARRIER**

Commercial Division  
Carrier Corporation

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DATE: 5/2/61  
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## SERVICE BULLETIN

SUBJECT:

**ECONOMIZER GAS LOOP AND DAMPER ASSEMBLY**

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### PURPOSE

To describe the operation of the economizer gas loop and economizer damper assembly, and to forward instructions for servicing the damper assembly.

### MACHINES AFFECTED

All standard 19C3, 4, and 5 machines shipped after February 1961.

### PROCEDURES

#### A. Operation

Figure 1 shows the economizer loop in place on the machine.

Figure 2 shows the economizer damper assembly. At installation, copper tubing is connected between the cooler and the flare connection (Item 18). The diaphragm (Item 15) is subjected to economizer pressure on the damper side, and cooler pressure on the spring side. During low load operation when the cooler pressure and economizer pressure approach each other, the damper closes by diaphragm spring (Item 17) pressure. The damper is normally closed when the compressor is shut down.

#### B. Servicing

Most of the economizer damper assembly can be serviced with the gas loop in place on the compressor. However, the loop must be removed to service the damper blade.

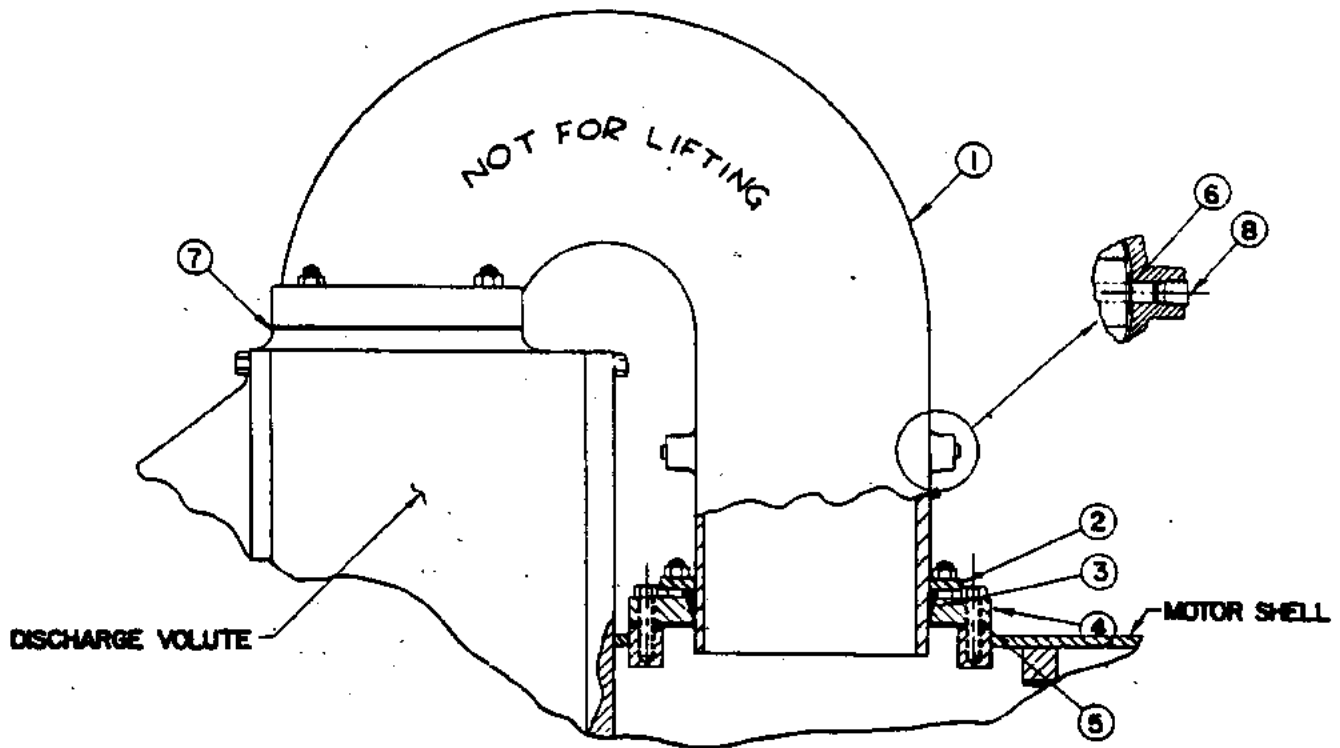
**CAUTION:** The economizer gas loop assembly is an aluminum casting, and cannot be used for lifting.

To adjust the damper assembly, set the inside nut (Item 19) approximately 1-1/4" from the end of the rod (Item 14). This will preload the diaphragm spring (Item 17), so that the damper blade will start to open at approximately 0.5 psi differential across the diaphragm. After final assembly, the blade must move freely on the damper blade shaft (Item 9) when the diaphragm is actuated.



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Legend

- (1) Economizer Gas Loop
- (2) Coupling Ring
- (3) Coupling Gasket
- (4) Bearing Inspection Cover
- (5) Gasket
- (6) Flat Washer
- (7) Gasket
- (8) Pipe Plug

Fig. 1. Economizer Gas Loop



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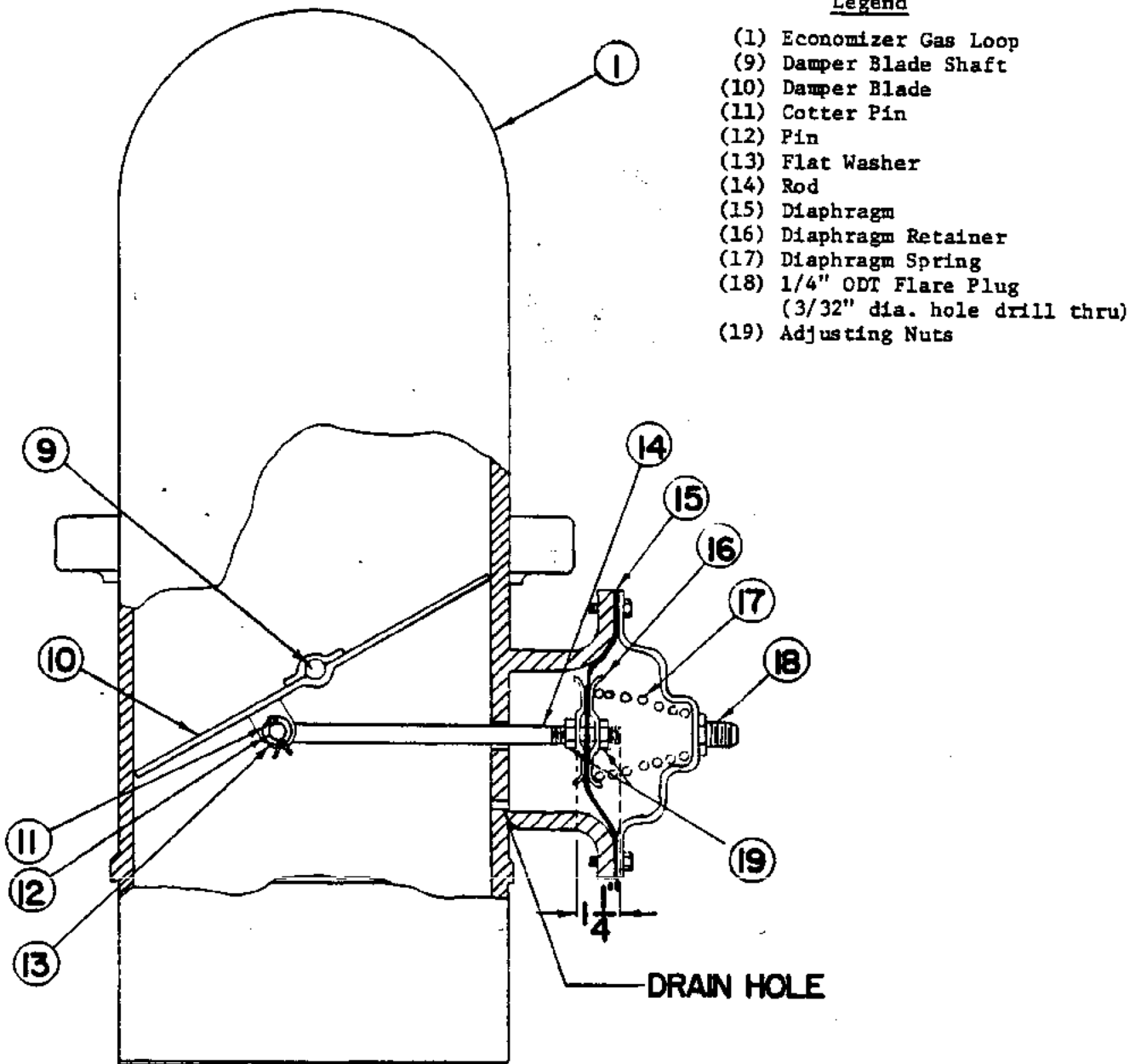


Fig. 2. Economizer Damper Assembly