

CHAPTER

78

EXHAUST

CHAPTER 78 - EXHAUST
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SPECIAL NOTE

WITHIN THIS MANUAL ALL REFERENCES TO LEFT AND RIGHT, CLOCKWISE AND COUNTERCLOCKWISE, FRONT AND REAR, ARE AS VIEWED FROM THE REAR OF THE AIRPLANE.

WITHIN THE ENGINE/PROPELLER MANUALS ALL SUCH REFERENCES ARE AS VIEWED FROM THE ACCESSORY GEARBOX/SPINNER BULKHEAD.

BECAUSE THE PIAGGIO P180 AVANTI IS CONFIGURED WITH "PUSHER" PROPELLERS, THE ENGINES ARE INSTALLED WITH THE ACCESSORY GEARBOX TOWARDS THE FRONT OF THE AIRPLANE; THEREFORE, IN THIS MANUAL ALL REFERENCES TO LEFT AND RIGHT, CLOCKWISE AND COUNTERCLOCKWISE, FRONT AND REAR (WHEN APPLIED TO ENGINE AND PROPELLER COMPONENTS) WILL BE THE OPPOSITE TO THE SAME REFERENCES IN THE ENGINE/PROPELLER MANUALS.

FOR EXAMPLE, ACCORDING TO THIS MANUAL, THE ENGINE ACCESSORY GEARBOX IS AT THE FRONT OF THE ENGINE; THE ENGINE MANUALS CONSIDER THE ACCESSORY GEARBOX TO BE THE REAR OF THE ENGINE.

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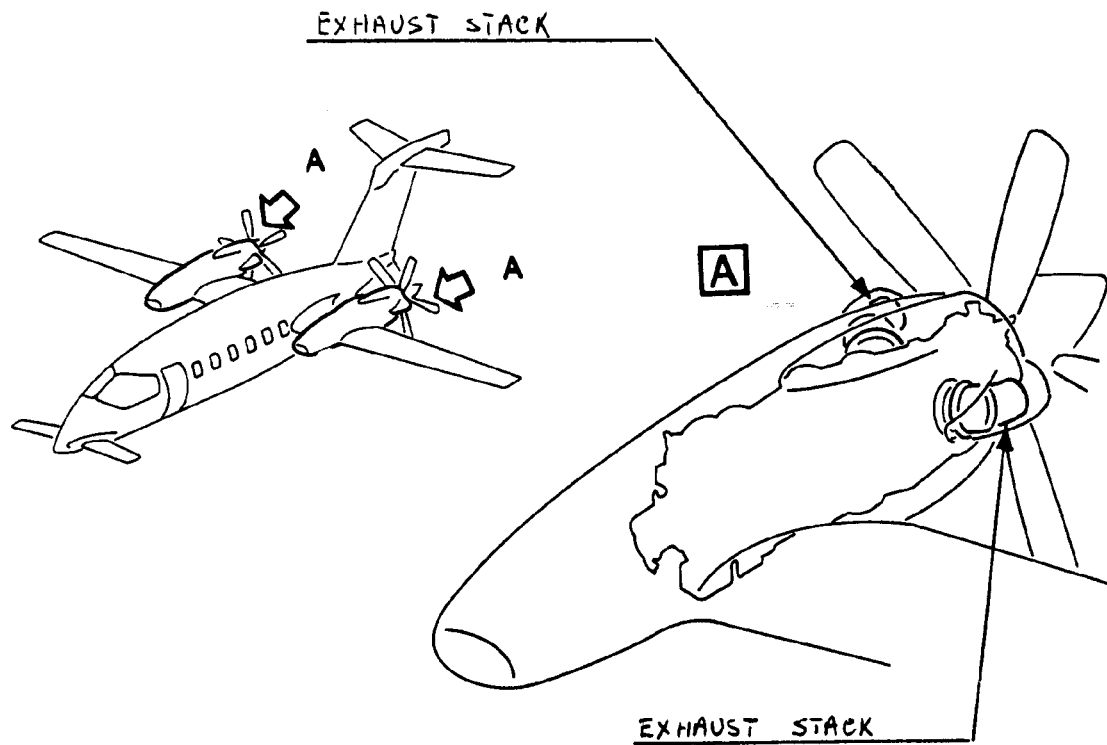
EXHAUST - DESCRIPTION AND OPERATION

1. General

This chapter gives the details of the exhaust stacks. The exhaust stacks are mounted onto the engine exhaust duct. Refer to the P&WC Engine Maintenance Manual for all other aspects of the exhaust system.

2. Description (Ref. Fig. 1)

The two exhaust stacks, one each side, are bolted to flanges on the engine exhaust duct. Each stack is a weldment of corrosion and heat-resistant steel, shaped to minimize power losses and direct exhaust gases away from the aircraft.



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Fig. 1 - Exhaust Stack

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EXHAUST - MAINTENANCE PRACTICES

1. General

WARNING: DO NOT TOUCH THE EXHAUST STACKS UNTIL THEY ARE COOL. THE TEMPERATURE STAYS HIGH AFTER THE ENGINE STOPS. HIGH TEMPERATURES CAN CAUSE INJURY TO PERSONS.

A. This procedure gives the maintenance practices for the exhaust stacks.

2. Exhaust Duct - Removal (Ref. Fig. 201)

A. Fixtures, Test and Support Equipment

Covers/Caps/Plugs	Not specified
Access Platform	3.3 ft (1 m)

B. Referenced Information

Maintenance Manual Chapter [54-00-00](#)

C. Procedures

NOTE: This procedure is applicable to both the left hand and right hand installation. Data for the right hand procedure is given between parentheses.

WARNING: DO NOT TOUCH THE ENGINE COMPONENTS FOR A SHORT TIME AFTER THE ENGINE IS SHUTDOWN. THE ENGINE COMPONENTS CAN STAY HOT FOR UP TO ONE HOUR.

(1) Open, tag and safety these circuit breakers:

Pilot CB panel:
L ENG START
R ENG START

(2) Remove the access panels that follow (Refer to [54-00-00](#)):

430AL (440AL)
430AR (440AR)

(3) Note the engine exhaust duct flange / exhaust duct flange position.

(4) Remove the nuts (1), washers (2), bolts (3), and sector spacers (4) that fasten the engine exhaust duct flange (6) to the exhaust duct flange (5).

(5) Remove the exhaust duct (7).

(6) Put a cap on the engine exhaust duct.

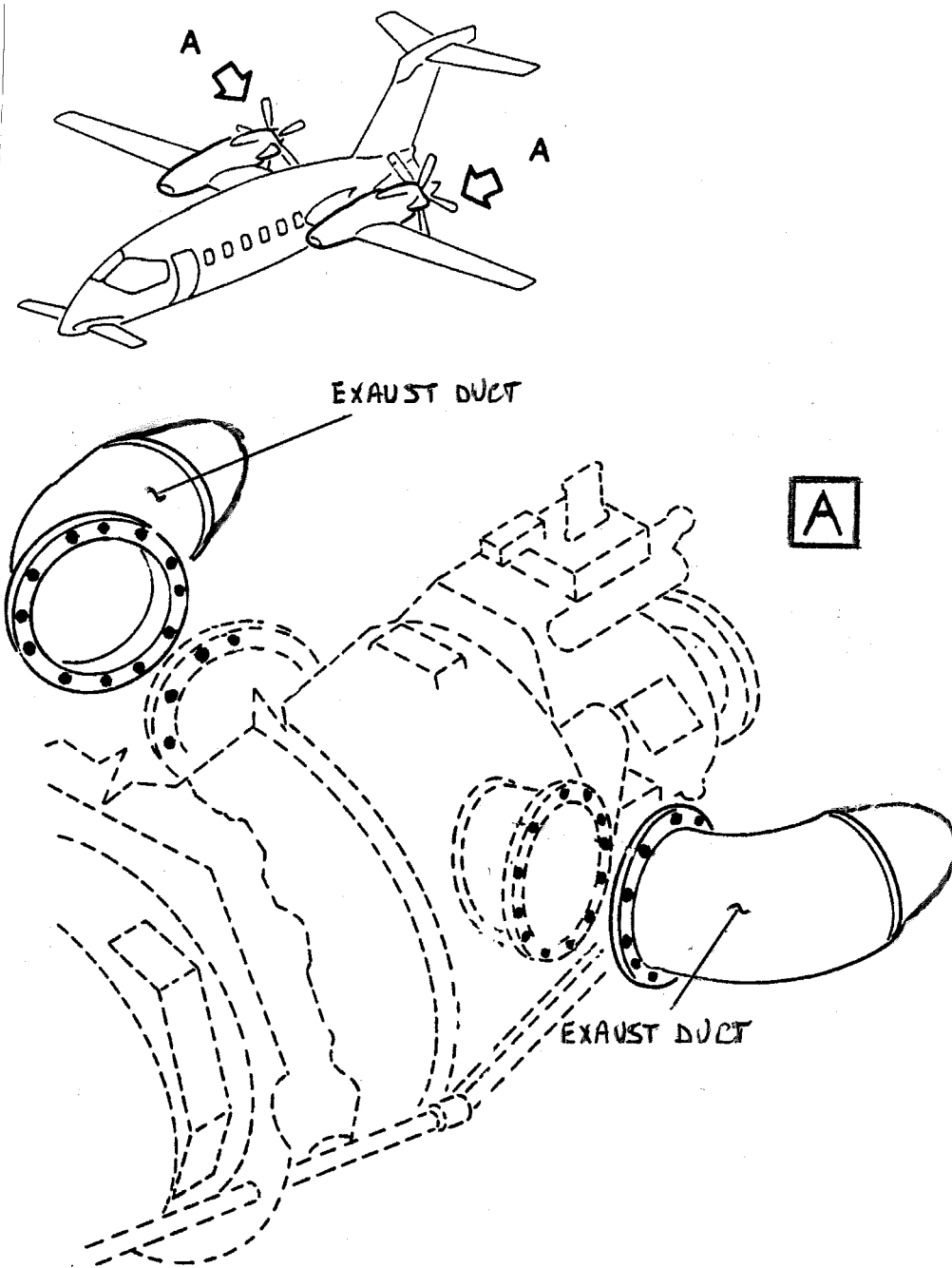


Fig. 201 - Exhaust Stacks - Removal/Installation (Sheet 1 of 2)

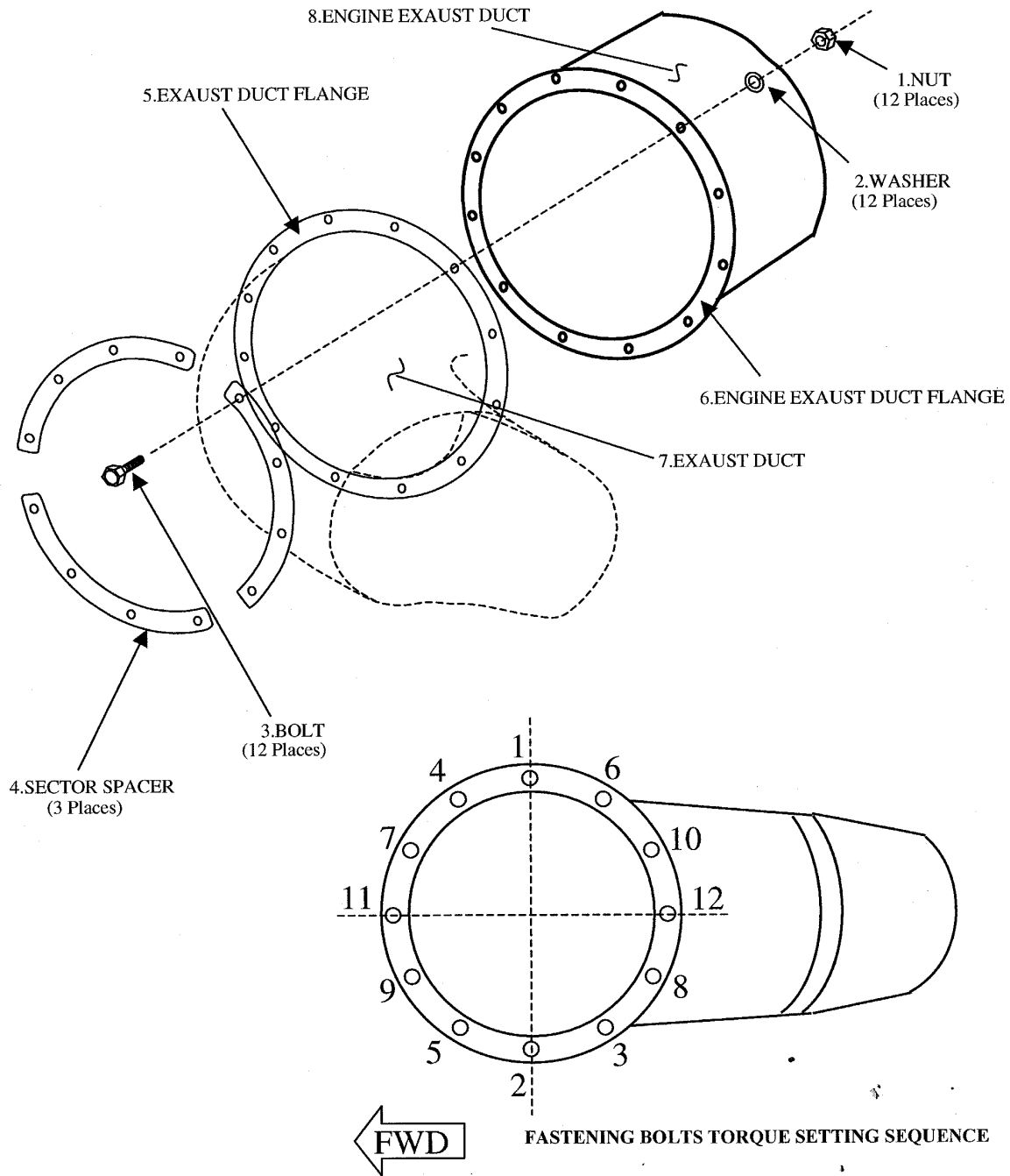


Fig. 201 - Exhaust Stacks - Removal/Installation (Sheet 2 of 2)

3. Exhaust Duct - Installation(Ref. Fig. 201)

A. Fixtures, Test and Support Equipment

Access Platform 3.3 ft (1m)

B. Referenced Information

Maintenance Manual Chapter [54-00-00](#)

C. Procedures

NOTE: This procedure is applicable to both the left hand and right hand installation. Data for the right hand procedure is given between parentheses.

(1) Make sure as necessary that:

- The applicable circuit breakers are open, tagged and safetied
- The system is safe
- Access is available
(Refer to the Removal Procedure)

NOTE: The exhaust stacks are not interchangeable.

(2) Remove the cover from the engine exhaust duct.

(3) Place the engine exhaust duct flange (6) to the exhaust duct flange (5) until the 12 holes are aligned.

NOTE: If the procedure is related to replacement/installation of a new stack P/N 80-336091-401 the sector spacers (Refer to SB-80-0145 Latest issue) have not to be installed.

(4) Install the engine exhaust duct flange (6) to the exhaust duct flange (5) with nuts (1), washers (2), bolts (3), and sector spacers (4) without tighten the bolts.

CAUTION: TORQUE THE BOLTS (3) IN SEQUENCE A AS SHOWN ON FIG. 201.

(5) Install the access panels that follow (Refer to [54-00-00](#)):

430 AL (440 AL)

430 AR (440 AR)

(6) Remove the safety tags and close these circuit breakers:

L ENG START

R ENG START

(7) Remove all tools, materials and equipment from the work area. Make sure that the area is clean.

4. Exhaust Duct - Inspection

A. Fixtures, Test and Support Equipment

Access platform 3.3 ft (1 m)

B. Referenced Information

Maintenance Manual Chapter [54-00-00](#)

C. Procedures

NOTE: This procedure is applicable to both the left hand and right hand installation. Data for the right hand procedure is given between parentheses.

(1) Open, tag and safety these circuit breakers:

Pilot CB panel:

L ENG START

R ENG START

(2) Remove the access panels that follow (Refer to [54-00-00](#)):

430AL (440AL)

430AR (440AR)

(3) Examine the exhaust stacks for burning, distortion, cracks and damage. None of these conditions are permitted. Repair or replace the defective parts as necessary.

(4) Examine the sector spacers for burning, distortion, cracks and damage. None of these conditions are permitted. Replace the defective parts as necessary.

(5) Install the access panels that follow (Refer to [54-00-00](#)):

430AL (440AL)

430AR (440AR)

(6) Remove the safety tags and close these circuit breakers:

Pilot CB panel:

L ENG START

R ENG START

(7) Remove all tools, materials and equipment from the work area. Make sure the area is clean.

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