

SERVICE BULLETIN



Service Bulletin No.: DA20-78-01, Rev. 1

Date Issued: November 28, 1997

Title: Exhaust System, Improved Joint Sealing

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1. ATA Code: 7800

PLANNING INFORMATION:

2. **Effectivity:** All DA20 Katana aircraft through serial number 10158 with the following exceptions (s/n 10010, 10122 thru 10124, 10127 thru 10133, 10140, 10147, 10149, 10153, 10154 and 10157).

3. **General:** Exhaust leakage may occur as a result of misalignment or deformation of the exhaust joints. This bulletin specifies replacement of the existing exhaust system with a new variant, incorporating improved exhaust joint sealing.

4. **Compliance:** Compliance with this bulletin is recommended at the next 100 hour inspection, only if exhaust leaks are evident.

5. **Approval:** Engineering data referenced or contained in this bulletin is Transport Canada approved as part of the type design.

6. **Labor:** Approximately 1 hour will be required to accomplish this modification.

7. Material:

<u>Description:</u>	<u>Part Number:</u>	
Pipe, Manifold, Exhaust, Front LH	20-7800-02-02	(Qty 1)
Pipe, Extension, Manifold, Front LH	20-7800-01-05	(Qty 1)
Pipe, Manifold, Exhaust, Front RH	20-7800-01-04	(Qty 1)
Pipe, Manifold, Exhaust, Rear LH	20-7800-01-03	(Qty 1)
Pipe, Manifold, Exhaust, Rear RH	20-7800-01-02	(Qty 1)
Assembly, Muffler	20-7800-01-01	(Qty 1)

The above part numbers replace assembly part number 9910000034.

Wrap, Thermal	09-41600	(Qty 6 ft)
Clamp, Exhaust	ARS-M8-33	(Qty 1)
Clamp, Hose	MS35842-12	(Qty 2)
Springs, Tension	938-795	(Qty 8)

The above material may be ordered as kit DA20-78-01MK. Contact Diamond Customer Support for price and availability.

8. **Special Tools:** None.

9. **References:** DA20 Katana Maintenance Manual Doc. No. DA201.

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10. Accomplishment Instructions:

- 10.1 Inspect exhaust joints for evidence of excessive exhaust leaks. If exhaust leaks are found, incorporation of this service bulletin is recommended and the operator should contact Diamond customer support for a replacement kit.
- 10.2 Disconnect all ducting from the muffler shroud (Air Intake, Carb Heat, Heat Box). Unbolt the exhaust system from the engine, by removing the exhaust manifold nuts (ref. figure 1).
- 10.3 Use the tension springs (p/n 938-795) to attach the front RH exhaust manifold pipe (p/n 20-7800-01-04), the front LH exhaust manifold pipe (p/n 20-7800-02-02), and the rear RH and LH exhaust manifold pipes (p/n 20-7800-01-02 and 20-7800-01-03) to their respective positions on the muffler assembly (p/n 20-7800-01-01) (ref. figure 1).
- 10.4 Apply loctite anti-seize compound (p/n 76764) to all four (4) exhaust pipe ends, as indicated in figure 1. Bolt the above assembly (ref. paragraph 10.3) to the engine, and lightly tighten the exhaust manifold nuts as they are reinstalled.
- 10.5 Slide the exhaust clamp (p/n ARS-M8-33) on to the front LH exhaust manifold pipe (p/n 20-7800-02-02).
- 10.6 Slide the front LH manifold extension pipe (p/n 20-7800-01-05) into the open end of the front LH exhaust manifold pipe. Bolt the extension pipe to the engine, torquing the exhaust manifold nuts until deflection starts in the retaining flange.
- 10.7 Adjust the exhaust system for best fit. Torque the front RH exhaust manifold nuts until deflection starts in the the retaining flange. Repeat this for the rear LH and RH exhaust manifold nuts.
- 10.8 Slide the exhaust clamp into position as shown in figure 1, and torque it down to 20 ft/lbs. Re-install all ducting connections to the muffler shroud (Air intake, Carb Heat and Heat Box).
- 10.9 Double check all connections and clearances. Make any adjustments required. Ground run the engine and check that the carb heat and cabin heat are operating normally, as well as checking for leaks. Adjust as required.
- 10.10 Once cooled down, re-check all bolt, nut and clamp connections in the exhaust system for loosening. Tighten as required.

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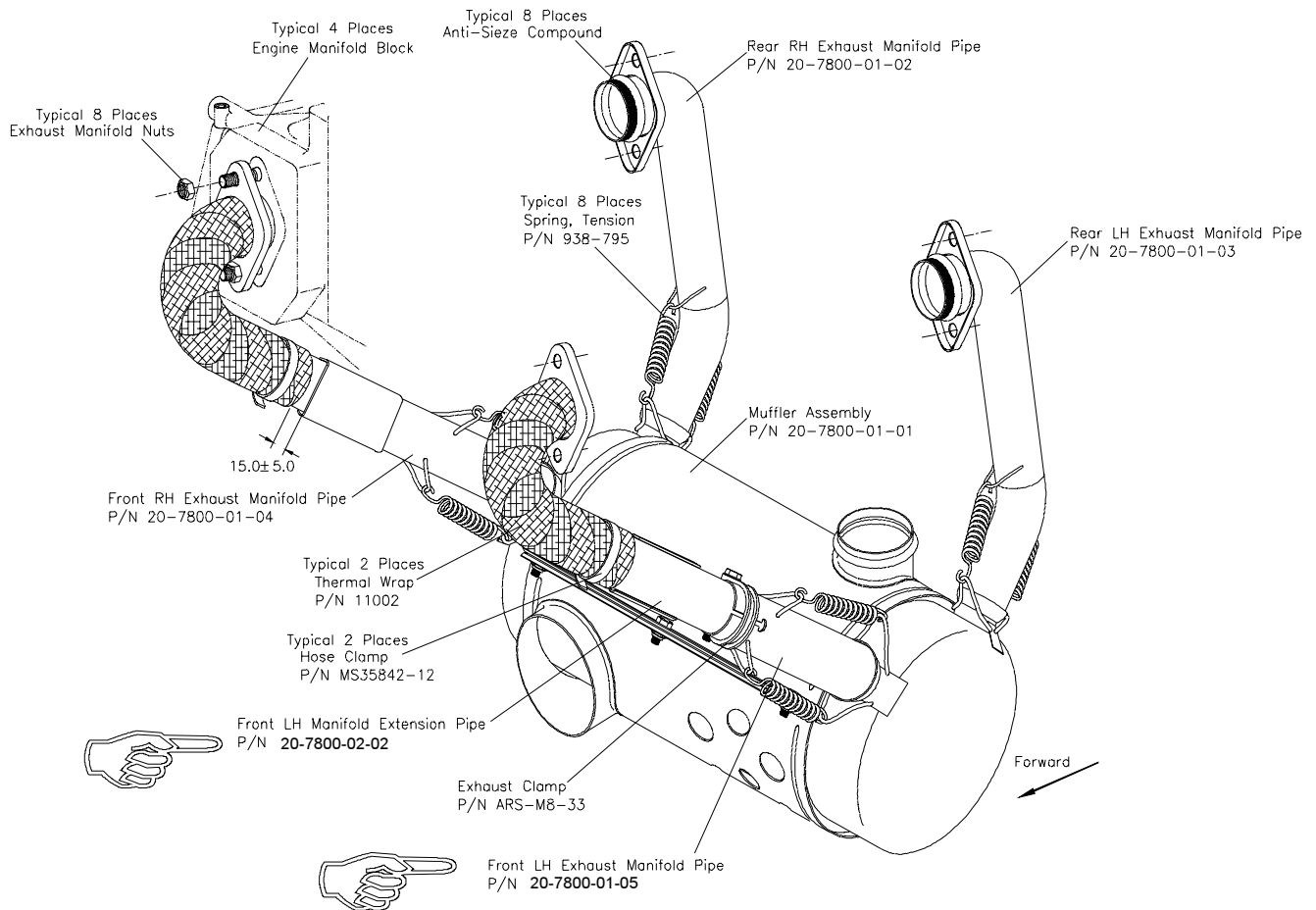


Figure 1.

11. Weight and Balance: Negligible.

12. Electrical Load Data: Not applicable.

13. Credit: Contact Diamond Aircraft Industries Customer Support.

To obtain satisfactory results, procedures specified in this service information letter must be accomplished in accordance with accepted methods and current government regulations. Diamond Aircraft Industries Inc. cannot be responsible for the quality of work performed in accomplishing the requirements of this service information letter.

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