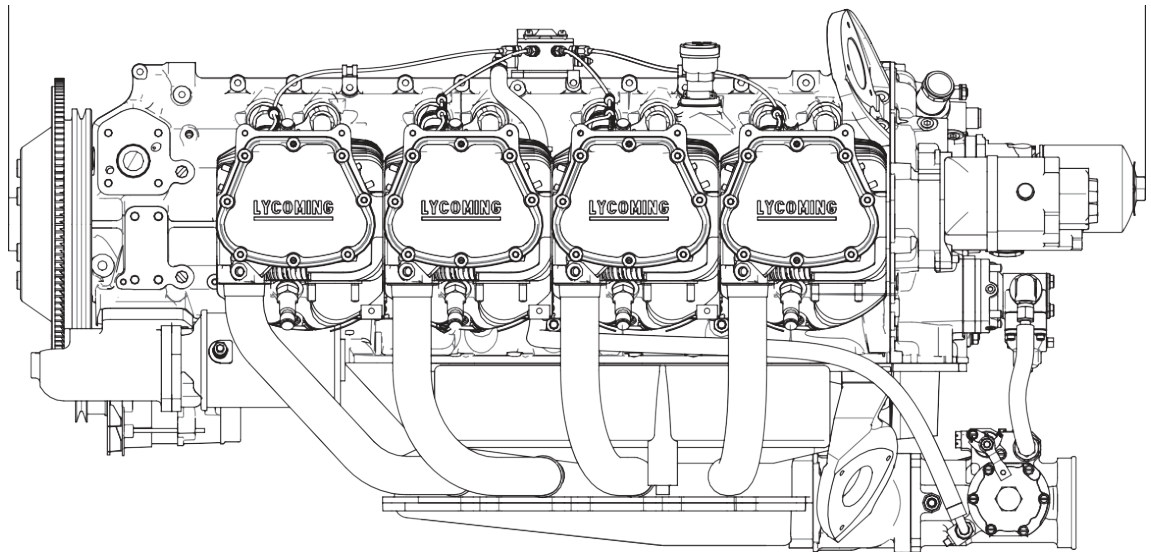


SSP-385

RENTAL SERVICE TOOLS FOR LYCOMING PISTON ENGINES

June 25, 2026



652 Oliver Street
Williamsport, PA 17701

For additional information:

Mailing address:

Lycoming Engines
652 Oliver Street
Williamsport, PA 17701 U.S.A.

Phone:

Factory: U.S. and Canada toll free: +1(800) 258-3279
International Customers: +1(570) 323-6181

Lycoming's regular business hours are Monday through Friday from 8:00 A.M. through 5:00 P.M. Eastern Time (-5 GMT)

Visit us online at:

www.lycoming.com



©2026 Lycoming. All Rights Reserved.
Lycoming Engines, a division of AVCO Corporation.

All brand and product names referenced in this publication are trademarks or registered trademarks of their respective companies.

INTRODUCTION

This catalog contains information related to rental tools used for modification and maintenance of Lycoming opposed aircraft engines. It consists of two sections: The first is an alphabetical index and the second is a numerical pictorial listing with brief descriptions and service publication cross reference. Tools required for service or maintenance can vary depending on the type of engine and are listed in Chapter 05-00 of the Service Manual or Maintenance Manual for the engine model. Additional references can be found in SSP-384, Special Service Tools for Lycoming Piston Engines.

The illustrations used in this catalog show the general appearance of the tools but are not related to size. In some cases, a single illustration has been used to cover several tools similar in appearance, with different tool numbers; therefore, it is necessary, when ordering tools, to note carefully the descriptions and tool numbers in the text.

PRICES

This catalog does not list prices or guarantee availability. A separate numerically arranged parts and tool price list is available and is supplied to distributors of Lycoming Engines.

HOW TO ORDER

Rental tools contained herein are on a first come first service basis. Lycoming maintains rental tools to meet factory print requirements for field service. Although some rental tools listed are in one-off supply stock, several other part numbers are maintained in multiples. Rental Tools are inspected upon field use return for normal wear and/or damage. If damage is found the customer may be liable for repair or replacement cost. Upon factory inspection acceptance, credit will be released to the appropriate credit card company. Please expect 30-45 days after Lycoming release for returned credit to populate on subject credit card account. Tools must be ordered by or through authorized Lycoming distributors. A tool must be designated by a tool number identified with a "R" suffix, and together with a name sufficiently descriptive to identify the tool. It is not necessary to write the full catalog description of the tool. Do not enter price of the tool on the order. Be sure to give definite shipping instructions. Lycoming cannot ship to P.O. boxes. Please use a physical address and included contact name, phone number and business hours.

ADDITIONAL NOTES

Refer to the latest revision of Service Letter 234 for instructions and procedures regarding rental tools. Complete understanding of the SL-234 is necessary to ensure full credit upon completion of the rental agreement. The protective cases are part of the rental tool program and must be returned. All rental tools are subject to inspection to receive full credit.

All rental tools can be purchased from Lycoming, notify the distributor if you wish to purchase the tool. Lycoming reserves the right to discontinue any service tool without prior written notice.

This page intentionally left blank.

**Lycoming Rental Tools
Alphabetical Index**

Description	Tool Number
A	
Air flow tester (Magneto Pressurization)	R-ST-395
B	
Fuel injection line bender	R-ST-524
Burnisher, Rocker shaft bushing	R-64541
C	
Cable, iE ² service	R-ST-543 (Alternate)
Cable, iE ² service	R-ST-544 (Primary)
D	
Drift, Crankshaft, Oil Plug	R-ST-46, R-ST-295, R-64770
Drill, Thru-Stud Dowel	R-ST-124
Driver, Crankshaft Welch Plug	R-64681
G	
Gage, Valve Guide	R-ST-71, R-ST-310
H	
T Handle, (Used with Certain Reamers)	R-ST-523
I	
Installer, Crankshaft Oil Seal	R-ST-383
M	
Micrometer and Set Master, Stretch Bolt	R-ST-488
O	
Oil Pressure Relief Valve Repair Tools	R-ST-546
P	
Plate, Prop Governor Circuit	R-ST-483
Puller -	
Crankcase Thru Stud	R-ST-271
Piston Pin	R-64843
Valve Guide	R-ST-49
Oil Seal (Use with Customer Supplied Slide Hammer)	R-ST-172
R	
Reamer -	
Rocker Shaft Bushings	R-64826
Crankcase, Thru Stud Dowel	R-ST-125
Piloted Crankcase .010 Thru stud	R-ST-366-1
Piloted Crankcase .050 Thru stud	R-ST-366-5
Expandable Oil Bypass Seat	R-ST-338
Oil Pressure Relief Valve .001 OS	R-ST-244
Oil Pressure Relief Valve .004 OS	R-ST-246
Valve Guide, ID .4040-.4050	R-64684
Valve Guide, ID .4375-.4385	R-64900
Valve Guide, ID .5000-.5010	R-ST-309-2
Valve Guide large, ID .4995-.5005	R-ST-143-2
Reamers Continued on Next Page	

**Lycoming Service Tools
Alphabetical Index**

Valve Guide (Ni-Resist) ID .4985-.4995 with Pilot .4778-.4783	R-ST-113-2
Valve Guide (Ni-Resist) ID .4985-.4995 with Pilot .4201-.4208	R-ST-113-4
Valve Guide (Ni-Resist) ID .4980	R-ST-267
Valve Guide OD +.010 .5913-.5923	R-ST-430-2
Valve Guide small ID .4995-.5005	R-ST-143-3
T	
Tap, Heli-coil, Spark Plug (.010 oversize)	R-64596-1
Tool -	
Fuel Injector & Controller Linkage	R-ST-318, R-ST-319
Deck Temperature	R-ST-264-B
Expanding, Heli-coil	R-ST-547
Repair, Heli-coil, STD-1102 Plug	R-ST-549
Repair, Heli-coil, STD-1339 Plug	R-ST-548
Press-Out, Connecting Rod Bushing	R-ST-531
Prop Bushing	R-ST-115
Swaging	R-ST-289, R-64781, R-64948
W	
Wrench, Shroud Tube	R-ST-25
V	
Valve Spring Compressor	R-ST-142

Air Flow Tester (Magneto Pressurization): R-ST-395



Fuel Injection Line Bender: R-ST-524



Lycoming Service Tools
Alphabetical Index

Burnisher, Rocker Shaft Bushing: R-64541



Cable, iE2 Service (Use if R-ST-544 isn't Available): RT-ST-543



Cable iE2 Service: R-ST-544

NOTE: ST-541 Cable must be used with Field Service Tool Version 6.0 or later.



Drift, Crankshaft Oil Plug: R-ST-46

Installation of Rear Crankshaft Oil Plug (Plug size 1.380/1.382 inch, P/N 71640)



Lycoming Service Tools Alphabetical Index

Drift, Crankshaft Oil Plug: R-ST-295

Installation of Rear Crankshaft Oil Plug (Plug size 1.251/1.254-inch, P/N 60945, 74711)

NOTE: Crankshaft must be removed from engine and sent to Lycoming for cross tube installation



Drift, Crankshaft Plug: R-64770

Installation of Rear Crankshaft Oil Plug (Plug Size 1.753/1.755-inch, P/N 61510).



Lycoming Rental Tools

Drill, Thru-stud Dowel: R-ST-124



Driver, Crankshaft Welch Plug (Front Plug): R-64681



Lycoming Service Tools

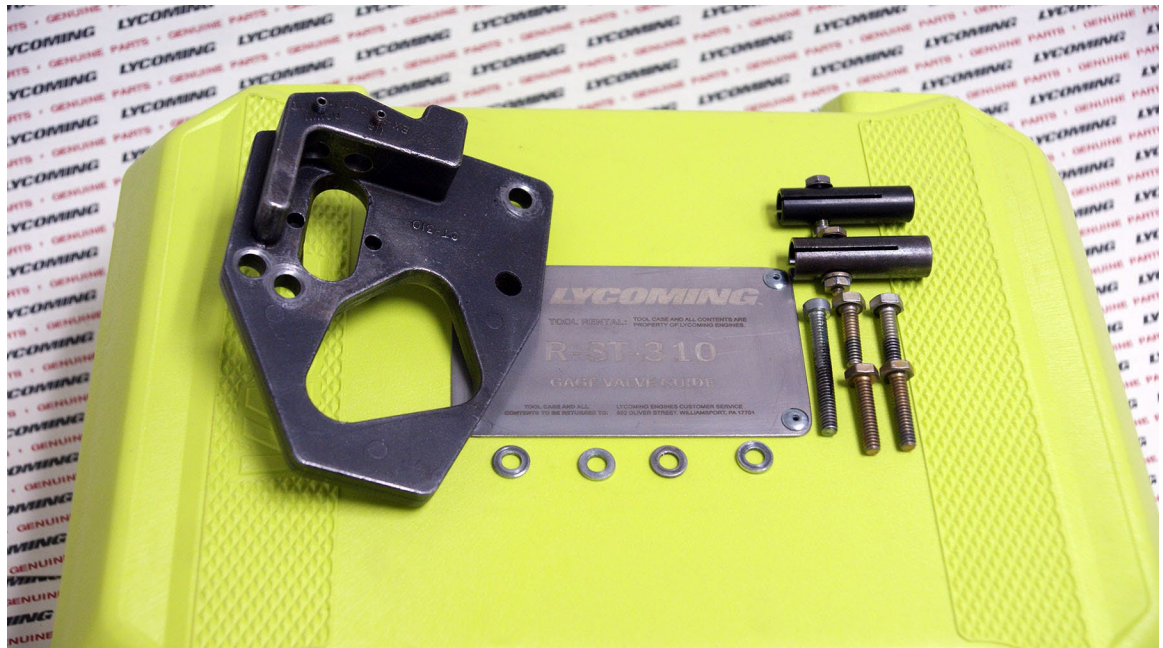
Gage, Valve Guide: R-ST-71

NOTE: To Determine Exhaust Valve Guide Wear or Carbon Build Up (All parallel valve engines).



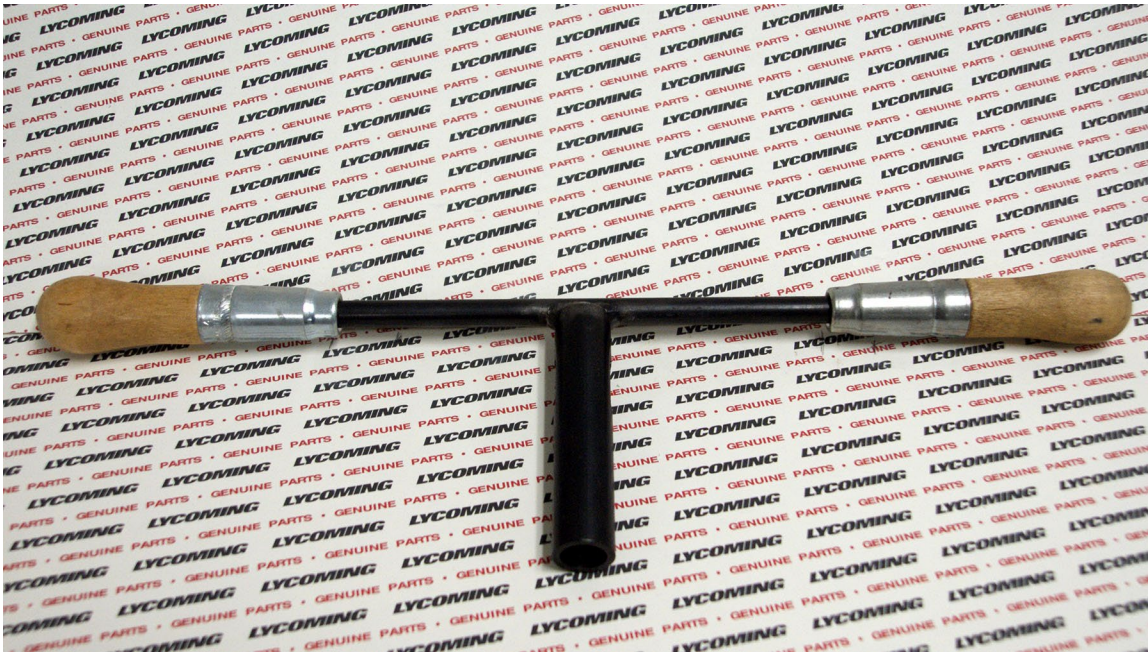
Gage, Valve Guide: R-ST-310

NOTE: To Determine Exhaust Valve Guide Wear or Carbon Build Up, Angle Valve Engines with 1/2 inch Exhaust Valves.



Lycoming Rental Tools

T-Handle, (Use with Tapered Collet Reamers): R-ST-523



Installer, Crankshaft Oil Seal: R-ST-383



Lycoming Service Tools

Micrometer and Set Master, Stretch Bolts: R-ST-488
Factory Calibrated



Oil Pressure Relief Valve Repair: R-ST-546



Lycoming Rental Tools

Plate, Prop Governor Circuit Test: R-ST-483



Puller, Crankcase Thru-Stud: R-ST-271

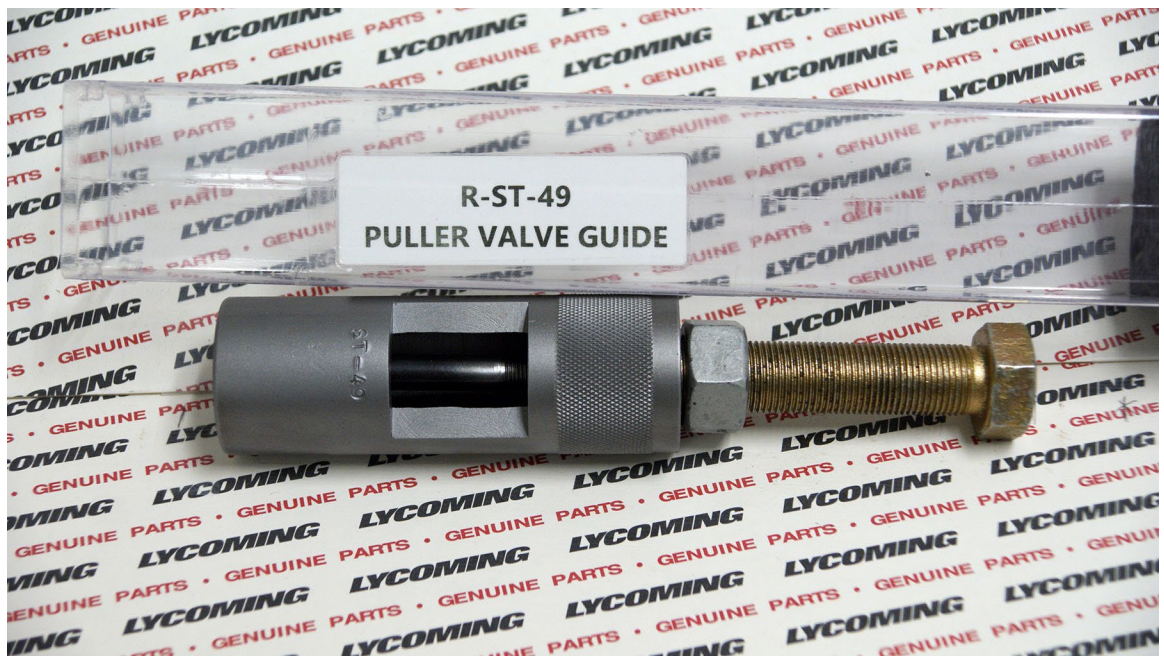


Lycoming Service Tools

Puller, Piston Pin: R-64843



Puller, Valve Guide: R-ST-49



Lycoming Rental Tools

Puller, Oil Seal: R-ST-172

NOTE: Use With Slide Hammer That Has 5/8-18 threads.



Reamer, Rocker Shaft Bushings: R-64826

All Parallel Valve Engines, Except for 76 Series Engines.



Lycoming Service Tools

Reamer, Crankcase Thru-Stud Dowel: R-ST-125



Reamer, Piloted Crankcase (.010-inch o/s): R-ST-366-1
All Engines with P/N 76220-P10 Thru-Stud.



Lycoming Rental Tools

Reamer, Piloted Crankcase Oversized (.005-inch o/s): ST-366-5
All Engines with P/N 76220-P05.



Reamer, Adjustable: R-ST-388
Oil Temperature Bypass Valve Seat.



Lycoming Service Tools

Short Version: R-ST-388

Oil Temperature Bypass Valve Seat.

Short Version is Best for In Airframe Use



Reamer, Oil Pressure Relief Valve Oversized: RT-ST-244
(.001-inch o/s)



Lycoming Rental Tools

Reamer, Oil Pressure Relief Valve Oversized: R-ST-246
(.004-inch o/s).



Reamer, Valve Guide, Long Version: R-64684, Use T-handle R-ST-523
Valve Guide with .4040-.4050-inch ID.



Lycoming Service Tools

Reamer, Valve Guide: R-64900, Use T-handle R-ST-523
Exhaust Valve Guide with .4375-.4385-inch ID.



Reamer, Valve Guide: R-ST-309-2, Use T-handle R-ST-523
Exhaust Valve Guide (Ni-Resist) Pilot .4777-.4783 inch ID with .5000-.5010 inch Finish ID.



Lycoming Rental Tools

Reamer, Valve Guide, Short Version: R-ST-309-2

Exhaust Valve Guide (Ni-Resist) Pilot .4777-.4783 inch ID with .5000-.5010 inch Finish ID.



Reamer, Valve Guide: R-ST-143-2, Use T-handle R-ST-523

Exhaust Valve Guide (Ni-Resist) Pilot .4778-.4783 inch ID with .4995-.5005 inch Finish ID.



Lycoming Service Tools

Reamer, Valve Guide: R-ST-113-2, Use T-handle R-ST-523

Exhaust Valve Guide (Ni-Resist) Pilot .4778-.4783 inch ID with .4985-.4995 inch Finish ID.



Reamer, Valve Guide: R-ST-113-4, Use T-handle R-ST-523

Valve Guide (Ni-Resist) Pilot .4201-.4208 inch ID with .4985-.4995 inch Finish ID.



Lycoming Rental Tools

Reamer, Valve Guide: R-ST-267, Use T-handle R-ST-523

Valve Guide (Ni-Resist) Pilot .4778-4783-inch ID with .4980 inch Finish ID.

NOTE: *This reamer is used only when valve guide is honed to size after reaming.*



Reamer, Valve Guide Oversized: R-ST-430-1, Use T-handle R-ST-523

Valve Guide with .5913-.5923 inch ID, (.010 inch o/s)



Lycoming Service Tools

Reamer, Valve Guide Oversized: R-ST-430-2, Use T-handle R-ST-523
Valve Guide with .5913-.5923 inch ID, (.020-inch o/s).



Reamer, Valve Guide: R-ST-143-3, Use T-handle R-ST-523
Valve Guide with .4995-.5005-inch ID.



Lycoming Rental Tools

Tap, Heli-Coil, Spark Plug, Oversized: R-64596-1
(.010-inch o/s).

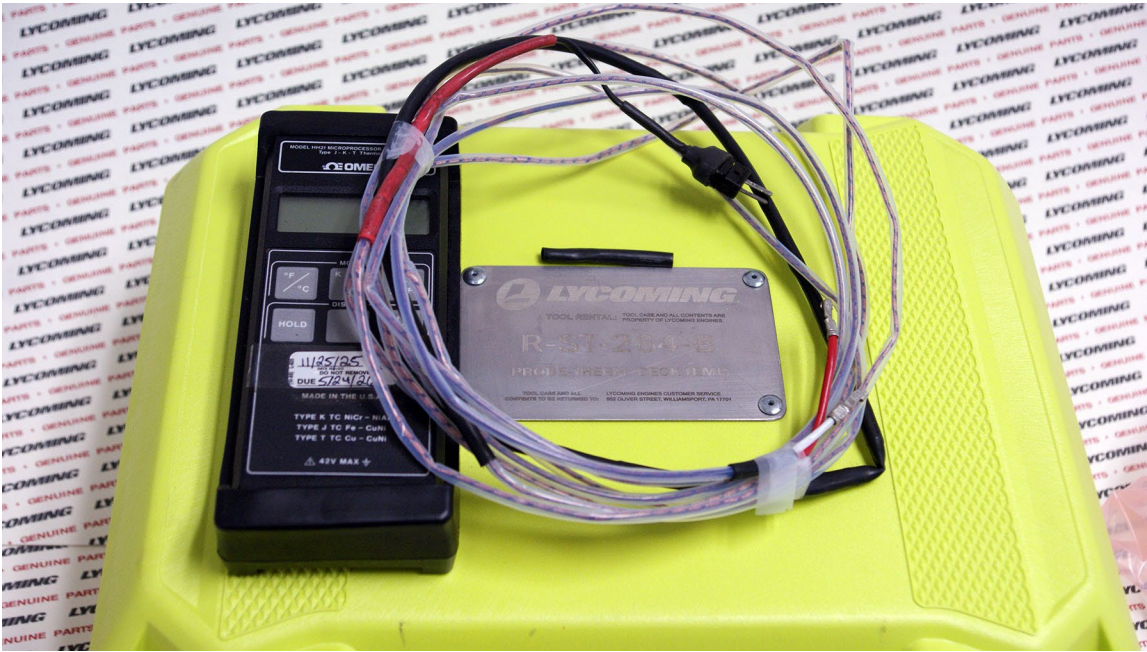


Tool & Gage, Fuel Injector and Controller Linkage: R-ST-318, R-ST-319



Lycoming Service Tools

Tool, Deck Temperature Probe: R-ST-264-B
3/8-16 NC-3 Thread.



Tool, Heli-coil Expanding: R-ST-547
18 MM Spark Plug Heli-coil Insert



Lycoming Rental Tools

Tool, Repair, Heli-coil, STD-1102 Plug: R-ST-549



Tool, Repair, Heli-Coil, STD-1339 Plug: R-ST-548



Lycoming Service Tools

Tool, Press-out, Connecting Rod Bushing: R-ST-531



Tool, Prop Bushing: R-ST-115



Lycoming Rental Tools

Tool, Swaging: R-ST-289

Intake Pipes with 1.542-1.568-inch ID, P/N 72167, 72168, 72169, 75121, 75123, 75125.



Tool, Swaging: R-64781

Intake Pipes with 1.672-1.696-inch ID, P/N 69602, 71699, 78914.



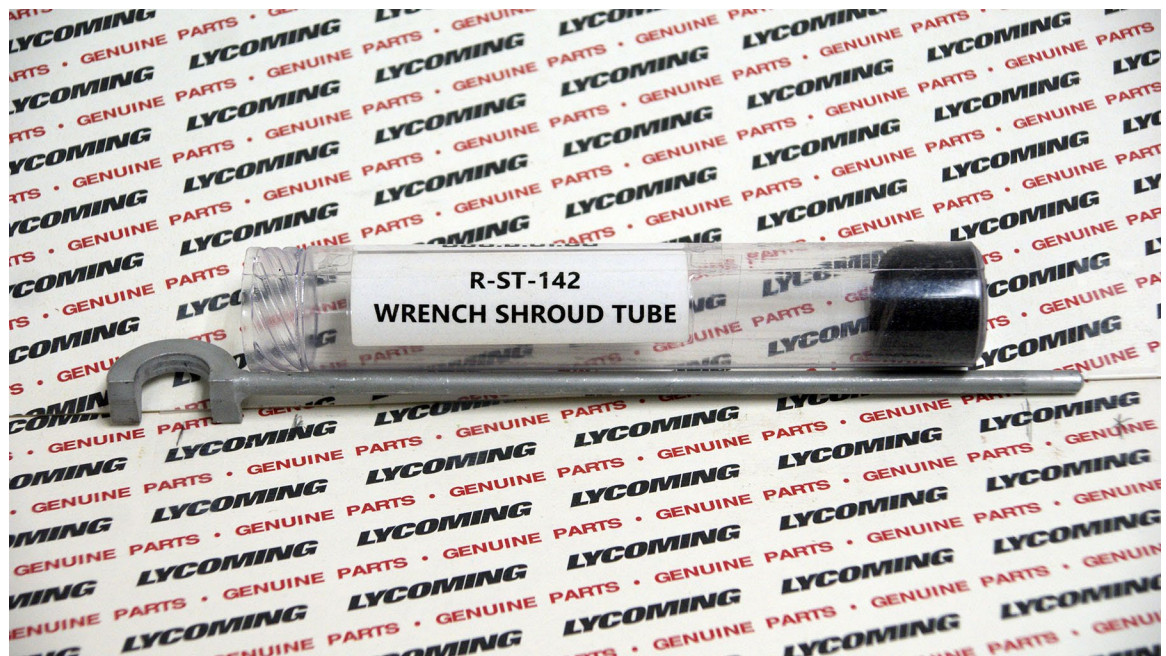
Lycoming Service Tools

Tool, Swaging: R-64948

Intake Pipes with 1.422/1.446-inch ID, P/N 61379, 61377, 62015, 70482.



Wrench, Shroud Tube: R-ST-142



Lycoming Rental Tools

Valve Spring Compressor: R-ST-25



Lycoming Service Tools

Service Publication Reference
Always Refer to Latest Revision of Service Publication

Tool	Description	Service Publication
R-ST-395	Air Flow Tester	SI-1308
R-ST-524	Fuel Line Bender	SB-342
R-64541	Burnisher, Rocker Shaft	Engine Overhaul Manual
R-ST-543	Cable, iE2 Service	iE2 Field Service Tool User Manual, SSP-122
R-ST-544	Cable, iE2 Service	iE2 Field Service Tool User Manual, SSP-122
R-ST-46	Drift, Crankshaft Oil Plug	Engine Overhaul Manual
R-ST-295	Drift, Crankshaft Oil Plug	Engine Overhaul Manual
R-64770	Drift, Crankshaft Oil Plug	Engine Overhaul Manual
R-ST-124	Drill, Thru-Stud Dowel	SI-1112, SI-1123
R-64681	Driver, Crankshaft Plug (Front)	SI-1583
R-ST-71	Gage, Valve Guide	SB-293, SB-388
R-ST-310	Gage, Valve Guide	SB-388
R-ST-523	T Handle, (Use with Reamers)	N/A
R-ST-383	Installer, Crankshaft Oil Seal	SI-1324
R-ST-488	Micrometer, Stretch Bolt	SI-1458
R-ST-546	Oil Pressure Relief Valve Repair	SI-1172
R-ST-483	Plate, Prop Governor Circuit	SI-1462
R-ST-271	Puller, Crankcase Thru-Stud	SI-1123, SI-1290
R-64843	Puller, Piston Pin	Engine Overhaul Manual
R-ST-49	Puller, Valve Guide	SI-1092, SI-1136, SI-1246
R-ST-172	Puller, Oil Seal	SL-195
R-64826	Reamer, Rocker Shaft Bushings	Engine Overhaul Manual
R-ST-125	Reamer, Thru-Stud Dowel	SI-1112, SI-1123
R-ST-366-1	Reamer, Thru-Stud (.010 o/s)	SI-1290
R-ST-366-5	Reamer, Thru-Stud (.050 o/s)	SI-1290
R-ST-388	Reamer, ½ Inch Valve Guide	SI-1116, SI-1425
R-ST-244	Reamer, Oil Relief Valve (.001 o/s)	SI-1172
R-ST-246	Reamer, Oil Relief Valve (.004 o/s)	SI-1172
R-64684	Reamer, Valve Guide (ID .4040-.4050)	SI-1425
R-64900	Reamer, Valve Guide (ID .4375-.4385)	SI-1425
R-ST-309-2	Reamer, Valve Guide (ID .5000-.5010)	SI-1116, SI-1425
R-ST-143-2	Reamer, Valve Guide (ID .4995-.5005)	SI-1342, SI-1425
R-ST-113-2	Reamer, Valve Guide, Ni-Resist (Pilot .4828-.4833)	SI-1425
R-ST-113-4	Reamer, Valve Guide, Ni-Resist, (Pilot .4201-.4208)	SI-1425
R-ST-267	Reamer, Valve Guide, Ni-Resist, (ID .4980)	SI-1200
R-ST-430-1	Reamer, Valve Guide, (OD + .010)	Engine Overhaul Manual
R-ST-430-2	Reamer, Valve Guide, (OD + .020)	Engine Overhaul Manual
R-ST-143-3	Reamer, Valve Guide, (ID .4995-.5005)	SI-1342, SI-1425
R-64596-1	Tap, Heli-coil, Spark Plug, (.010 o/s)	SI-1043
R-ST-318, 319	Tool, Gage & Fixture, Fuel Injector and Controller	SI-1211

Lycoming Rental Tools

R-ST-264B	Tool, Deck Temperature Probe	SI-1187
R-ST-547	Tool, Expanding, Heli Coil	N/A
R-ST-549	Tool, Repair, Heli-coil, STD-1102 plug	N/A
R-ST-548	Tool, Repair, Heli-coil, STD-1339 plug	N/A
R-ST-531	Tool, Press-out, Connecting Rod Bushing	SB-632, SB-630
R-ST-115	Tool, Prop Bushing	SB-253, SI-1098, SI-1111
R-ST-289	Tool, Swaging	SI-1355
R-64781	Tool, Swaging	N/A
R-64948	Tool, Swaging	N/A
R-ST-142	Wrench, Shroud Tube	Engine Overhaul Manual
R-ST-25	Valve Spring Compressor	SI-1425