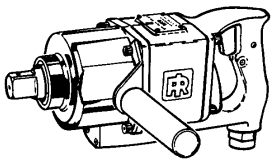


TPD1354

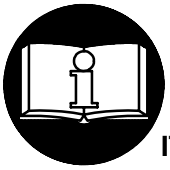
03539343
Form P7064
Edition 8
June, 2000

GB

OPERATION AND MAINTENANCE MANUAL FOR SERIES 2934B AND 2940B SUPER DUTY IMPACTOOLS

NOTICE

Series 2934B and 2940B Impactools are designed for use in structural fabrication, machinery maintenance, railroad maintenance, pipe and valve flange applications and installation of lag screws.
Ingersoll–Rand is not responsible for customer modification of tools for applications on which Ingersoll–Rand was not consulted.



⚠ WARNING

IMPORTANT SAFETY INFORMATION ENCLOSED.
READ THIS MANUAL BEFORE OPERATING TOOL.
IT IS THE RESPONSIBILITY OF THE EMPLOYER TO PLACE THE INFORMATION IN THIS MANUAL INTO THE HANDS OF THE OPERATOR.
FAILURE TO OBSERVE THE FOLLOWING WARNINGS COULD RESULT IN INJURY.

PLACING TOOL IN SERVICE

- **Always operate, inspect and maintain this tool in accordance with all regulations (local, state, federal and country), that may apply to hand held/hand operated pneumatic tools.**
- **For safety, top performance, and maximum durability of parts, operate this tool at 90 psig (6.2 bar/620 kPa) maximum air pressure at the inlet with 3/4" (19 mm) inside diameter air supply hose.**
- **Always turn off the air supply and disconnect the air supply hose before installing, removing or adjusting any accessory on this tool, or before performing any maintenance on this tool.**
- **Do not use damaged, frayed or deteriorated air hoses and fittings.**
- **Be sure all hoses and fittings are the correct size and are tightly secured. See Dwg. TPD905–1 for a typical piping arrangement.**
- **Always use clean, dry air at 90 psig maximum air pressure. Dust, corrosive fumes and/or excessive moisture can ruin the motor of an air tool.**
- **Do not lubricate tools with flammable or volatile liquids such as kerosene, diesel or jet fuel.**
- **Do not remove any labels. Replace any damaged label.**

USING THE TOOL

- **Always wear eye protection when operating or performing maintenance on this tool.**
- **Always wear hearing protection when operating this tool.**
- **Keep hands, loose clothing and long hair away from rotating end of tool.**
- **Note the position of the reversing lever before operating the tool so as to be aware of the direction of rotation when operating the throttle.**
- **Anticipate and be alert for sudden changes in motion during start up and operation of any power tool.**
- **Keep body stance balanced and firm. Do not overreach when operating this tool. High reaction torques can occur at or below the recommended air pressure.**
- **Tool shaft may continue to rotate briefly after throttle is released.**
- **Air powered tools can vibrate in use. Vibration, repetitive motions or uncomfortable positions may be harmful to your hands and arms. Stop using any tool if discomfort, tingling feeling or pain occurs. Seek medical advice before resuming use.**
- **Use accessories recommended by Ingersoll–Rand.**
- **Use only impact sockets and accessories. Do not use hand (chrome) sockets or accessories.**
- **Impact wrenches are not torque wrenches. Connections requiring specific torque must be checked with a torque meter after fitting with an impact wrench.**
- **This tool is not designed for working in explosive atmospheres.**
- **This tool is not insulated against electric shock.**

NOTICE

The use of other than genuine Ingersoll–Rand replacement parts may result in safety hazards, decreased tool performance, and increased maintenance, and may invalidate all warranties.

Repairs should be made only by authorized trained personnel. Consult your nearest Ingersoll–Rand Authorized Servicenter.

Refer All Communications to the Nearest Ingersoll–Rand Office or Distributor.

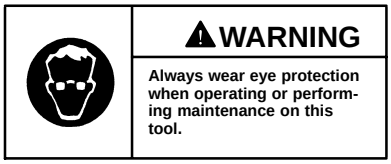
Printed in U.S.A.

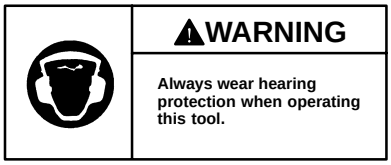
Ingersoll-Rand®

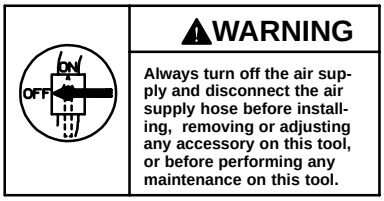
WARNING LABEL IDENTIFICATION

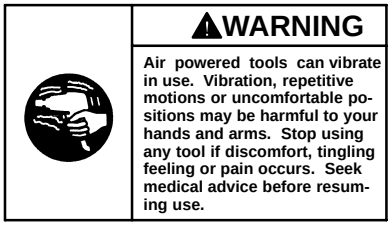
⚠ WARNING

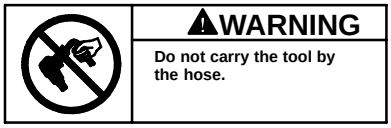
FAILURE TO OBSERVE THE FOLLOWING WARNINGS COULD RESULT IN INJURY.

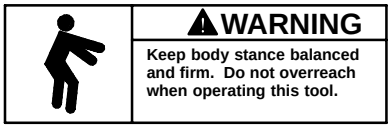


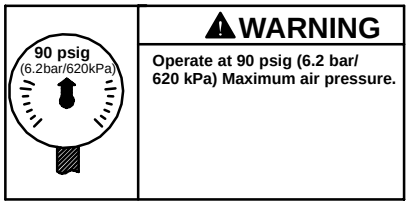












PLACING TOOL IN SERVICE

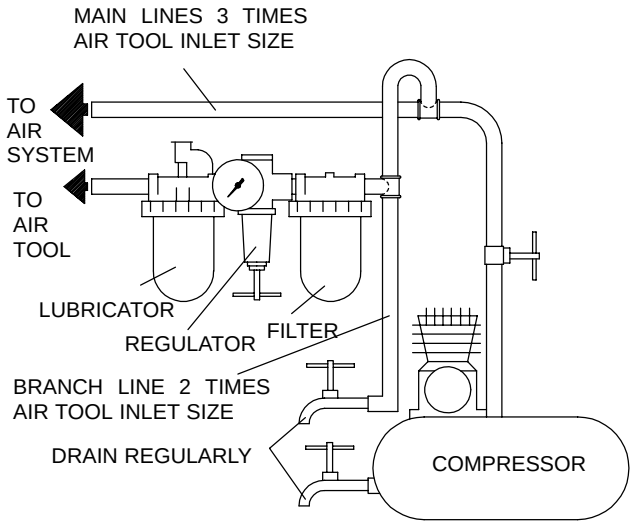
LUBRICATION

Ingersoll–Rand No. 50 **Ingersoll–Rand No. 100**

Always use an air line lubricator with these tools.
We recommend the following Filter–Lubricator–Regulator Unit:

For USA – No. C28–04–FKG0–28
For International – No. C28–C4–FKG0

After each forty–eight hours of operation, or as experience indicates, inject about 4 cc of Ingersoll–Rand No. 100 Grease into the Grease Fitting.



(Dwg. TPD905–1)

SPECIFICATIONS

Model	Type of Handle	Drive	Impacts per min.	Recommended Torque Range	■Sound Level dB (A)		♦Vibrations Level
		in.		ft–lbs (Nm)	Pressure	•Power	m/s^2
2934B2	inside trigger	1” sq. dr.	750	500–1,100 (678–1,490)	114.5	127.5	16.7
2940B2	inside trigger	1” sq. dr.	850	1,000–1,600 (1,360–2,170)	115.5	128.5	15.7
2934B9	inside trigger	1” sq. dr. at 90°	780	500–660 (678–890)	96.2	109.2	13.6
2934A2	outside trigger	1” sq. dr	750	500–1,100 (678–1,490)	114.5	127.5	16.7
2940A2	outside trigger	1” sq. dr	850	1,000–1,600 (1,360–2,170)	115.5	128.5	15.7

■ Tested in accordance with ANSI S5.1–1971 at free speed

♦ Tested to ISO8662–1 loaded with frictionbrake to 9 RPM

• ISO3744

DECLARATION OF CONFORMITY

We ***Ingersoll–Rand, Co.***

(supplier's name)

78192 Trappes Cedex France

(address)

declare under our sole responsibility that the product,

Series 2934B and 2940B Super Duty Impactools

to which this declaration relates, is in compliance with the provisions of

98/37/EC *Directives.*

By using the following Principle Standards: ***ISO8662***

Serial No. Range: ***(1994 →) XUA XXXXX →***

D. Vose
Name and signature of authorised persons

Kevin R. Morey
Name and signature of authorised persons

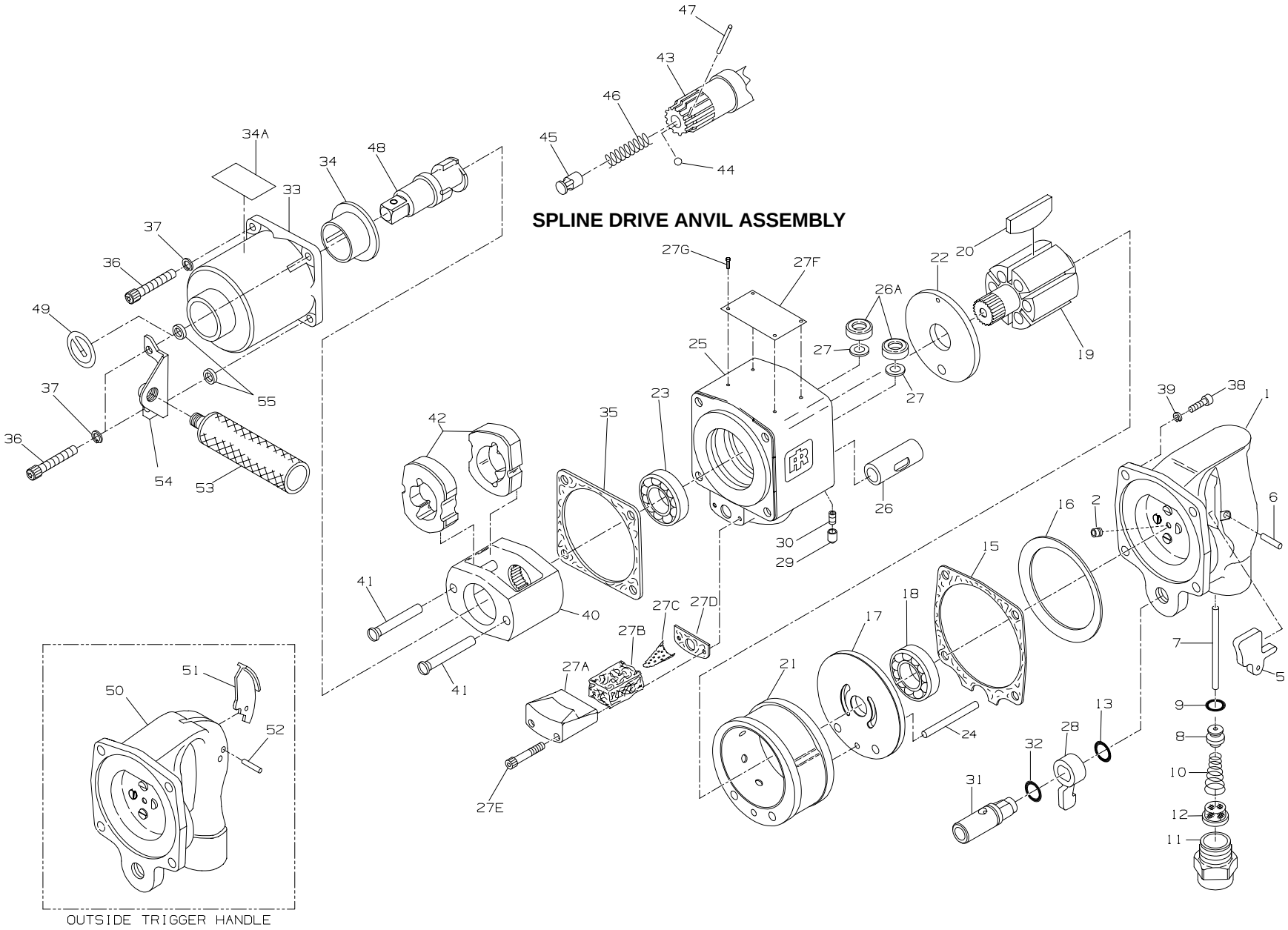
June, 2000
Date

June, 2000
Date

NOTICE

SAVE THESE INSTRUCTIONS. DO NOT DESTROY.

When the life of the tool has expired, it is recommended that the tool be disassembled, degreased and parts be separated by material so that they can be recycled.



(Dwg. TPA1333–3)

PART NUMBER FOR ORDERING

	1	Inside Trigger Handle Assembly	2934–A92A
	2	Grease Fitting	130SR–188
	5	Trigger	834–93A
	6	Trigger Pin	534–265
	7	Throttle Valve Plunger	2934–302
	8	Throttle Valve Assembly	2934–A50
♦•	9	Throttle Valve Face	2934–159
♦	10	Throttle Valve Spring	834–51
	11	Straight Inlet	845–565
♦•	12	Air Strainer Screen	434–61
♦•	13	Reverse Valve Seal	R00BR–210
♦•	15	Handle Gasket	2934–283
	16	Motor Clamp Washer	2934–207
	17	Rear End Plate	2934–12
♦	18	Rear Rotor Bearing	508–97
	19	Rotor	
		for 2934B	2934–53
		for 2940B	2940–53
♦•	20	Vane Packet (set of 6 Vanes)	
		for 2934 B	2934–42–6
		for 2940 B	2940–42–6
	21	Cylinder	
		for 2934B	2934–3
		for 2940B	2940–3
	22	Front End Plate	2934–11
♦	23	Front Rotor Bearing	810–97
	24	Cylinder Dowel	
		for 2934B	2934–98
		for 2940B	2940–98

PART NUMBER FOR ORDERING

	25	Motor Housing Assembly	
		for 2934B	2934–A40A
		for 2940B	2940–A40
	26	Reverse Valve Bushing	2934–330S
♦•	26A	Air Port Gasket (2)	R44H–210A
♦	27	Air Port Gasket Retainer (2)	2940–200
	27A	Exhaust Deflector	2934–23A
♦	27B	Exhaust Silencer	2940P–311
	27C	Exhaust Baffle	2934–124
	27D	Exhaust Gasket	2934–223
	27E	Deflector Screw (2)	R43F–104
	27F	Nameplate	
		for 2934B	2934–301
		for 2940B	2940–301
	27G	Nameplate Screw (4)	C32–302
	28	Reverse Lever	2934–658A
♦	29	Reverse Lock Plunger	4U–663B
♦	30	Reverse Lock Plunger Spring	4U–664
	31	Reverse Valve Assembly	2934–A329
♦•	32	Reverse Valve Bushing Seal	85H–167

* Not illustrated.

♦ Indicates Tune–up Kit part.

• To keep downtime to a minimum, it is desirable to have on hand certain repair parts. We recommend that you stock one (pair or set) of each part indicated by a bullet (•) for every four tools in service.

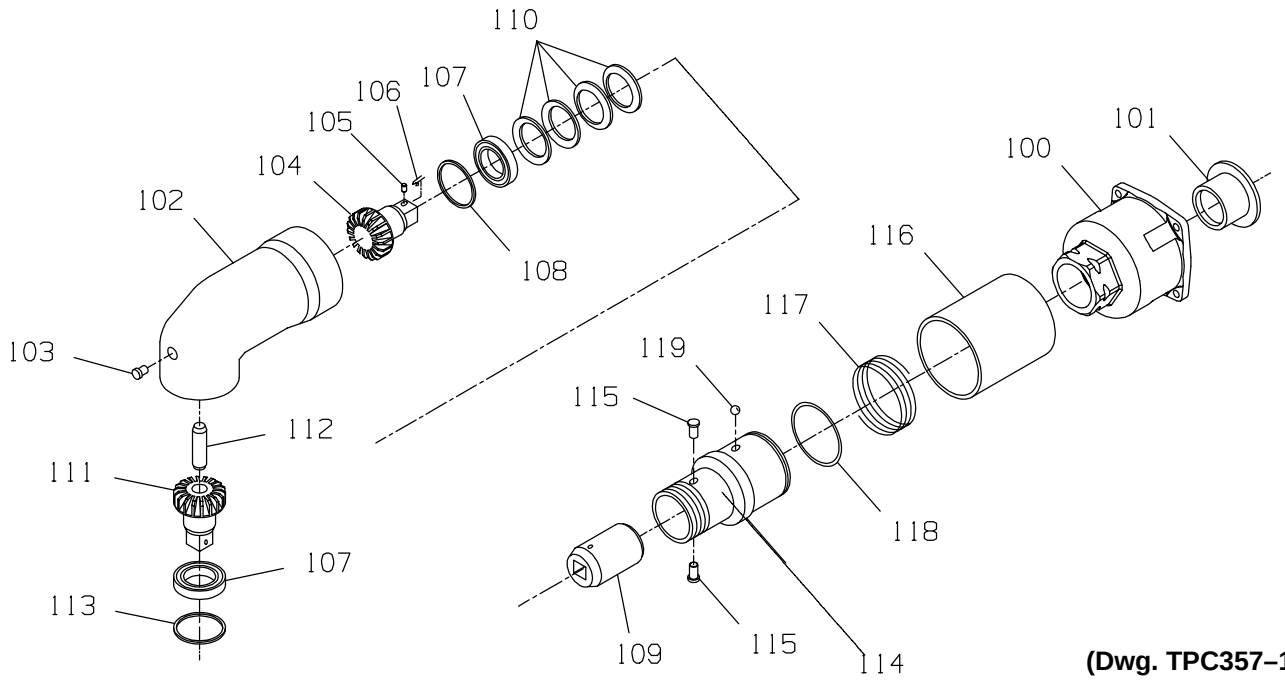
		PART NUMBER FOR ORDERING	
	33	Hammer Case Assembly	
		for 2934B	2934–A727
		for 2940B	2940–A727
	34	Hammer Case Bushing	2934–641
	34A	Hammer Case Label	
		for 2934B and 2940B	WARNING–2–99
	*	Oversize Hammer Case Bushing	
		.005” oversize	293–641–5
		.010” oversize	2934–641–10
		.015” oversize	2934–641–15
♦	35	Hammer Case Gasket	2934–36
	36	Hammer Case Cap Screw (4)	834–638
	37	Hammer Case Cap Screw Lock Washer (4)	34U–58
	38	Handle Cap Screw (4)	510–638
	39	Handle Cap Screw Lock Washer (4)	8U–58
	40	Hammer Frame Assembly	
		for 2934B	2934–A703
		for 2940B	2940–A703
	41	Hammer Pin (2)	
		for 2934B	2934–704
		for 2940B	2940–704
	42	Hammer (2)	
		for 2934B	2934–724
		for 2940B	2940–724
	43	Spline Drive Anvil Assembly	
		for 2934B	2934–A526
		for 2940B	2940–A526
	44	Socket Retaining Ball	D04–280
	45	Retaining Ball Plunger	845–230
	46	Retaining Plunger Spring	2940–231
	47	Plunger Retaining Pin	845–128

		PART NUMBER FOR ORDERING	
	48	1” Square Drive Anvil	
		Standard Length	
		for 2934B	2934–726
		for 2940B	2940–726
		6” Extended Length	
		for 2934B	2934–314–6
		for 2940B	2940–314–6
	49	Socket Retainer	RR10015S
	50	Outside Trigger Handle Assembly	2934–A1
	51	Trigger	844–78
	52	Trigger Pin	F02–15
		Also includes illustrated parts 2, 7, 8, 9, 10, 11, 12, and 13	– – –
	53	Dead Handle	834–48
	54	Dead Handle Bracket	2934–364
	55	Dead Handle Bracket Spacer (2)	2934–140
	*	Horizontal Hanger	2934–366
	*	Horizontal Hanger Spacer (2)	2934–140
	*	Side Spade Handle	T15–41
	*	Side Spade Handle Stud	534–448
	*	Side Spade Handle Stud Nut	107–73A
	*	Grease Gun	R000A2–228
	*	Tune–up Kit (includes illustrated parts 3, 9, 10, 12, 13, 15, 18, 20, 23, 26A [2], 27 [2], 27B, 29, 30, 32 and 35)	
		for 2934B	2934–TK3
		for 2940B	2940–TK3
	*	Exhaust Deflector Kit (includes illustrated parts 27A thru 27E)	2934–K23

* Not illustrated.

♦ Indicates Tune–up Kit part.

MODEL 2934B9 IMPACTOOL WITH NO. 2934A90 ANGLE ATTACHMENT



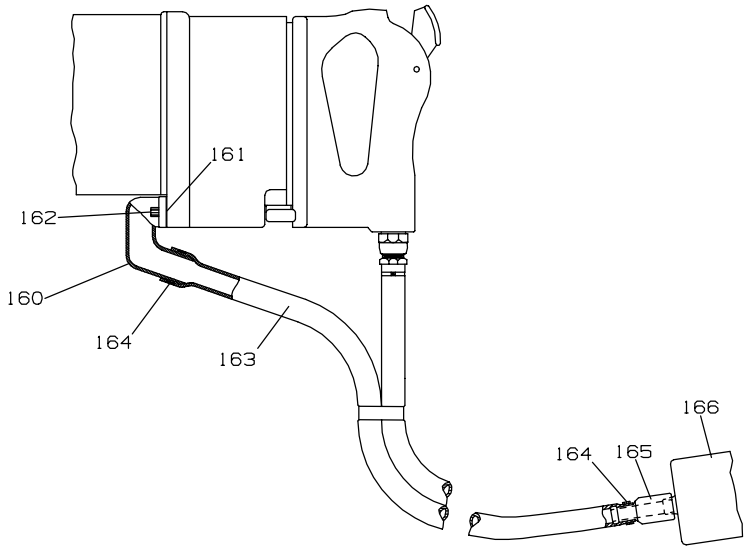
(Dwg. TPC357–1)

The 2934B Impactool can he furnished with a 1” square drive 2934A90 Angle Attachment and when so furnished is designated as 2934B9. Following are the parts used only in the 2934B9. All parts not listed are the same as for a 2934B Impactool with Inside Trigger Handle, Side Spade Handle and a 1” square drive standard length Anvil.

		PART NUMBER FOR ORDERING			PART NUMBER FOR ORDERING
100	Hammer Case Assembly	2934–A827	110	Bevel Pinion Clamp Washer (4)	808–207
101	Hammer Case Bushing	2934–641	111	Bevel Gear	436A90–601
*	Hammer Case Label	WARNING–2–99	112	Bevel Gear Spindle	436A90–607
	Angle Attachment Assembly . . .	2934A90	113	Bevel Gear Bearing Retainer . .	436A90–632
102	Angle Housing Assembly . .	436A90–A600	114	Angle Housing Connector	436A90–680
103	Grease Fitting	130SR–188	115	Connector Lock Pin (2)	436A90–609
104	Bevel Pinion Assembly	436A90–A602	116	Connector Retaining Sleeve . . .	436A90–681
105	Retainer Plunger	8U–715	117	Retaining Sleeve Spring	436A90–682
106	Retainer Plunger Spring .	5UHD–718	118	Connector Retaining Sleeve Stop	3BM–303
107	Bevel Pinion Bearing or Bevel Gear Bearing (2)	436A90–593	119	Connector Retaining Ball (3) . .	8U–722
108	Bevel Pinion Spacer	436A90–608	*	Socket Retainer	RR10015S
109	Bevel Pinion Driver	2934A90–563			

* Not illustrated.

PIPED AWAY EXHAUST KIT WITH MUFFLER



(Dwg. TPA559)

PART NUMBER FOR ORDERING **PART NUMBER FOR ORDERING**

	Piped–Away Exhaust Kit		163	Exhaust Hose	R21–230
	with Muffler	2940–KM184	164	Hose Clamp (2)	R21–31
	without Muffler	2940–K184	165	Hose Connector	
160	Exhaust Adapter	2940–167		(for 2940–KM184)	R21–185
161	Exhaust Adapter Gasket	2940–30	166	Muffler (for 2940–KM184) . . .	R21–674
162	Adapter Cap Screw (2)	AL–638			

MAINTENANCE SECTION

⚠ WARNING

Always wear eye protection when operating or performing maintenance on this tool.
Always turn off air supply and disconnect air supply hose before installing, removing or adjusting any accessory on this tool, or before performing any maintenance on this tool.

LUBRICATION

Each time a Series 2934B or 2940B Impactool is disassembled for maintenance and repair or replacement of parts, lubricate the tool as follows:

1. Work approximately 12 to 15 cc of Ingersoll–Rand No. 100 Grease into the impact mechanism. Coat the Anvil (48) lightly with grease. Also, coat the inside of the Hammer Case Bushing (34) with grease. Inject approximately 2 to 4 cc of grease into the Grease Fitting (2).
2. Use Ingersoll–Rand No. 50 Oil for lubricating the motor. Inject approximately 1 to 2 cc of oil into the Straight Inlet (11) before attaching the air hose.

DISASSEMBLY

General Instructions

1. Do not disassemble the tool any further than necessary to replace or repair damaged parts.
2. Whenever grasping a tool or part in a vise, always use leather covered or copper–covered vise jaws to protect the surface of the part and help prevent distortion. This is particularly true of threaded members and housings.
3. Do not remove any part which is a press fit in or on a subassembly unless the removal of that part is necessary for repairs or replacement.
4. Do not disassemble the tool unless you have a complete set of new gaskets and O–rings for replacement.

Disassembly of the Impactool

1. Grasp tool in copper–covered or leather–covered vise jaws with square drive upward.
2. Using a hex wrench, unscrew and remove the two Deflector Screws (27E). Remove Exhaust Deflector (27A) and Exhaust Gasket (27D) and, if necessary, pull Exhaust Baffle (27C) and Exhaust Silencer (27B) from Deflector.
3. Using a hex wrench, unscrew and remove the four Hammer Case Cap Screws (36) and Lock Washers (37). Remove Dead Handle Bracket (54) and two Bracket Spacers (55).
4. While lightly tapping on the end of Anvil (48) with a plastic hammer, lift off Hammer Case (33).
5. Remove the Hammer Case Gasket (35).
6. Remove Anvil by rotating it as it is lifted out of the assembly.
7. Lift remaining hammer assembly off rotor shaft.
8. Push two Hammer Pins (41) out of the Hammer Frame Assembly (40) and slide two Hammers (42) out of the Frame.

Disassembly of the Impact Mechanism

1. Set mechanism, driver end up, on a workbench.

NOTICE

Note the twin hammers within the Hammer Frame. These are identical, but must be placed in the Hammer Frame in a certain relationship. Using a felt–tipped pen, mark the top hammer "T↑" and the bottom hammer "B↑" with the arrows pointing upward. Mark both Hammers on the same end.

2. With mechanism sitting upright on a workbench, slowly rotate Anvil in a clockwise direction until it comes up solid.

NOTICE

If you continue to rotate the Anvil, it will cam the Hammers out of engagement. Do not allow this to happen; merely rotate the Anvil until if comes up solid.

3. Hold Hammer Frame firmly and, without disturbing hammers, gently lift Anvil, simultaneously rotating it clockwise about 1/8 of a turn, from the Hammer Frame.

NOTICE

The twin hammers will be free to slide from the Hammer Frame when the Hammer Pins are removed. Do not drop the Hammers.

4. With Anvil removed, lift out the two Hammer Pins,
5. Remove the Hammers.

Disassembly of the Reverse Valve

1. Lightly clamp Motor Housing Assembly (25) in leather–covered or copper–covered vise jaws with Trigger Handle Assembly (1) upward.

NOTICE

Excessive clamping pressure will distort the Motor Housing and make motor removal extremely difficult. Do not insert the hammer case end of the Motor Housing more than 1" (25 mm) into the vise jaws.

2. Using a hex wrench, unscrew and remove the four Handle Cap Screws (38) and Lock Washers (39). Lift assembled handle and Handle Gasket (15) off Motor Housing and set them aside.
3. Lift Motor Clamp Washer (16) off Housing.
4. Move Reverse Lever (28) to center position and using a drift pin to push from below, grasp Lever and lift Reverse Valve Assembly (31) out of Housing.

NOTICE

Make certain the Lever is in the center position to avoid jamming the Reverse Lock Plunger (29) when the Reverse Valve Assembly is removed.

5. Pull Lever off Reverse Valve and remove Reverse Valve Bushing Seal (32) from groove on Valve.
6. Using needle nose pliers, remove Reverse Lock Plunger and Reverse Lock Plunger Spring (30) from Motor Housing.

Disassembly of the Motor

1. Remove assembled motor and Motor Housing from vise jaws and using a plastic hammer, tap splined shaft of Rotor (19) to dislodge Rotor from Front Rotor Bearing (23).
2. Lift Motor Housing (25) off Rotor, Rear End Plate (17) and Rear Rotor Bearing (18) which will remain together as a unit.
3. Remove six Vanes (20) from Rotor.
4. Pull Rear End Plate off Rotor.
5. Open a set of vise jaws wide enough to clear hub of Rear End Plate and sharply rap hub end of end plate on top of jaws to dislodge Rear Rotor Bearing.
6. Remove Cylinder Dowel (24) and lay Motor Housing on top of vise jaws with Front Rotor Bearing (23) downward between jaws. Using a soft drift pin, tap Bearing out of the Housing.
7. To remove Cylinder (21) and Front End Plate (22), thread four 1/4"–20 thread socket head cap screws that are at least 3" (75 mm) long into handle end of Housing. Grasping Housing with installed screws downward, sharply strike heads of screws on a sturdy table to dislodge Cylinder. Cylinder should drop out of Housing after a few impacts. If it does not, proceed as follows:

⚠ WARNING

The following procedure requires the use of heat. Take all necessary precautions to prevent burns. Carefully heat alternate sides of Housing until it is very warm. Using thick, heavy gloves to avoid being burned, grasp Housing and repeat attempt to dislodge Cylinder.

8. Remove two Air Port Gaskets (26A) and Air Port Gasket Retainers (27) from Housing.

Disassembly of the Handle

1. Clamp Trigger Handle Assembly in leather–covered or copper–covered vise jaws with the Straight Inlet (11) upward.
2. Using a wrench, unscrew and remove Inlet as well as Air Strainer Screen (12) and valve Spring (10).
3. Remove Throttle Valve Assembly (8) and Valve Plunger (7) from Handle.
4. If Trigger (5) must be removed, use an arbor press to push Trigger Pin (6) from the Handle and slide Trigger out of slot in Handle.

ASSEMBLY

General Instructions

1. Always press on the **inner** ring of a ball–type bearing when installing the bearing on a shaft.
2. Always press on the **outer** ring of a ball–type bearing when installing the bearing in a bearing recess.
3. Whenever grasping a tool or part in a vise, always use copper–covered or leather–covered vise jaws.Take extra care with threaded members and housings.
4. Always clean every part and wipe every part with a thin film of oil before installation.
5. Apply a film of O–ring lubricant to all O–rings before final assembly.

Assembly of the Handle

1. Position Trigger (5) in Handle (1) and using an arbor press, push Trigger Pin (6) full length into Handle so that it captures Trigger.
2. Clamp Handle in leather–covered or copper–covered vise jaws with air inlet opening upward.
3. Coat Throttle Valve Plunger (7) with oil and insert it, rounded end leading, into the inlet hole in Handle.
4. Install a new Throttle Valve Face (9) on Throttle Valve (8) and insert assembly, Valve Face leading, into inlet hole in Handle.
5. Encircle cone end of Air Strainer Screen (12) with large end of Throttle Valve Spring (10) and insert both parts, Spring leading, into the inlet hole in Handle.
6. Install Straight Inlet (11) over Strainer Screen in Handle and tighten Inlet between 20 and 25 ft–lb (27 and 34 Nm) torque.
7. Remove Handle from vise and test Trigger. If Trigger functions properly, place assembled Handle aside. If it does not function properly, disassemble Handle to determine cause of problem.

Assembly of the Motor

1. Lightly clamp Motor Housing (25) in leather–covered or copper–covered vise jaws with handle end upward.

NOTICE

Excessive clamping pressure will distort the Motor Housing and make motor installation extremely difficult. Do not insert the hammer case end of the Motor Housing more than 1" (25 mm) into the vise jaws.

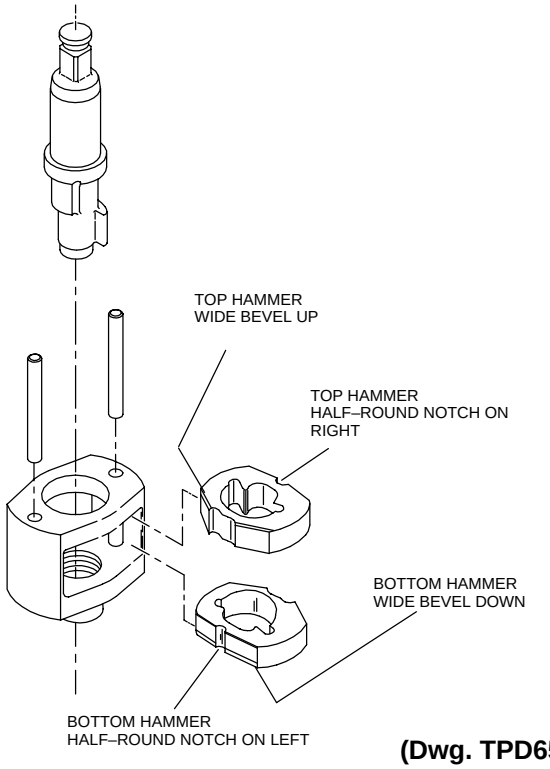
2. Coat inside surface of Housing and outer edge of Front End Plate (22) with a light film of oil.
3. Using a long tee hex wrench as an alignment pin, insert Front End Plate, copper face trailing, into Motor Housing. Align dowel hole in End Plate with dowel hole at the bottom of motor bore.
4. Lubricate and insert a new fiber Air Port Gasket Retainer (27) in one of the air ports inside Motor Housing.
5. Install an Air Port Gasket (26A) in the air port against Gasket Retainer with flat end of Gasket away from Retainer.
6. Repeat Steps 4 and 5 to install remaining Gasket and Retainer in the other air port.
7. Coat outside of Cylinder (21) with a light film of oil and using long tee hex wrench as an alignment pin to align the holes in Cylinder with holes in Front End Plate and Housing, insert Cylinder into Housing.
8. Coat inside of Cylinder and Rotor (19) with a light film of oil and insert the splined hub of Rotor through Cylinder into Front End Plate.
9. Coat each Vane (20) with a light film of oil and insert a Vane into each slot in the Rotor. Vanes must be installed with curved edge toward center of Rotor. Spin the Rotor to settle Vanes in position.
10. Using long tee hex wrench to align hole in Rear End Plate (17) with hole in Cylinder, insert the Rear End Plate, bronze face leading, into Motor Housing against the Cylinder. End Plate is properly seated when large trailing face of End Plate is slightly below face of Motor Housing.
11. Grease Rear Rotor Bearing (18) and install it in recess of Rear End Plate.
12. Remove alignment pin from assembled motor and install Cylinder Dowel (24). The Dowel is properly seated when end of Dowel does not protrude above End Plate.
13. Install Motor Clamp Washer (16) against Rear End Plate so that large outer edge of Washer contacts End Plate.

Assembly of the Reverse Valve

1. Inject a small amount of grease into hole in Motor Housing (25) where Reverse Lock Plunger (29) will be installed. With grease to hold them in position, install Reverse Lock Plunger Spring (30) and Lock Plunger.
2. Install a new Reverse Valve Bushing Seal (32) in annular groove on Reverse Valve (31).
3. Coat Reverse Valve with a light film of oil and install it in Motor Housing with the side hole nearest to Seal pointed toward Rotor (19).
4. Position Reverse Lever (28) on Reverse Valve and while using a thin blade screwdriver to depress Reverse Lock Plunger, push Lever onto Reverse Valve.
5. Place a new Handle Gasket (15) on the Motor Housing.
6. Examine Reverse Valve Seal (13) located inside Handle and if it is nicked, deformed or worn, remove it and install a new Seal.
7. Fill rotor cavity in Handle with recommended grease and position Handle on the Motor Housing.
8. Install four Handle Cap Screws (38) and Lock Washers (39) and using an alternate tightening pattern, tighten Screws to between 10 and 12 ft–lb (13.5 and 16.3 Nm) torque.
9. Move Reverse Lever through the forward and reverse positions to make certain the Lever locks in position.
10. Turn assembly in vise jaws and clamp on Handle with rotor shaft upward.
11. Grease Front Rotor Bearing (23) and place it over rotor shaft.

12. Select a socket or piece of tubing that will fit over the outside race of the Bearing and tap it with a hammer to seat Bearing into Housing.
13. Pack Bearing with additional grease and rotate rotor shaft. If shaft does not rotate smoothly, rap end of rotor shaft with a soft hammer to set motor and try to rotate shaft again.

Assembly of the Impact Mechanism



(Dwg. TPD652)

1. Coat Hammers (42) with a light film of Ingersoll–Rand Impactool Grease No. 100.
2. Replace Hammers in Hammer Frame (40) exactly as they were when you marked them prior to disassembly.

NOTICE

If you are installing new Hammers, or want to change the location of the existing Hammers to utilize both impacting surfaces, slide the Hammers in the Hammer Frame so that the half–round notch on one Hammer is located on one side of the Frame and the half–round notch on the other Hammer is located on the other side of the Frame.

3. Replace Hammer Pins (41).
4. Examine base of Anvil (48) and note its contour. While looking down through Hammer Frame, swing the top Hammer to its full extreme one way or another until you can match the contour of the Anvil. Enter the Anvil into the Hammer Frame and through the first Hammer. Swing the bottom Hammer in opposite direction from the top Hammer and maneuver Anvil slightly until it drops into bottom Hammer.

Assembly of the Impactool

1. Set assembled hammer mechanism onto rotor shaft spline.
2. Place Hammer Case Gasket (35) over mechanism and against face of Motor Housing.
3. Grease Anvil and top of Hammer Frame.
4. Place Hammer Case (33) over mechanism assembly against Gasket.
5. Assemble Dead Handle (53) to Dead Handle Bracket (54). Insert two Hammer Case Cap Screws (37) with Lock Washers (38) through Bracket and install two Dead Handle Bracket Spacers (55) on Screws. Position assembly against Hammer Case and thread the Screws into Housing.
6. Thread remaining two Cap Screws and Lock Washers into Housing and using an alternating pattern for all four fasteners, tighten Screws between 20 and 25 ft–lb (27 and 34 Nm) torque.
7. Install a new Exhaust Silencer (27B) in Exhaust Deflector (27A) and install the Exhaust Baffle (27C) in Deflector.
8. Position a new Exhaust Gasket (27D) against face of the Motor Housing. Position the assembled Deflector against the Gasket and secure it by tightening the two Deflector Screws (27E).

TROUBLESHOOTING GUIDE

Trouble	Probable Cause	Solution
Low power	Dirty Inlet Bushing or Air Strainer Screen and/or Exhaust Silencer	Using a clean, suitable, cleaning solution, in a well ventilated area, clean Air Strainer Screen, Inlet Bushing and Exhaust Silencer.
	Worn or broken Vanes	Replace **complete** set of Vanes.
	Worn or broken Cylinder and/or scored End Plates	Examine Cylinder and replace it if it is worn or broken or if bore is scored or wavy. Replace End Plates if they are scored.
	Dirty motor parts	Disassemble tool and clean all parts with a suitable cleaning solution, in a well–ventilated area. Reassemble tool as instructed in this manual.
	Improper positioning of Reverse Valve	Make certain that Reverse Valve is **fully** engaged to the left or right.
Motor will not run	Incorrect assembly of motor	Disassemble motor and replace worn or broken parts and reassemble as instructed.
	Insufficient lubricant in the impact mechanism	Remove Hammer Case Assembly and lubricate impact mechanism.
Tool will not impact	Broken or worn impact mechanism parts	Remove Hammer Case and examine impact mechanism parts. Replace any worn or broken parts.
	Impact mechanism not assembled correctly	Refer to **Assembly of the Impact Mechanism.**

NOTICE

SAVE THESE INSTRUCTIONS. DO NOT DESTROY.

Service Centers

Ingersoll–Rand Company
510 Hester Drive
White House, TN 37188
USA
Tel: (615) 672 0321
Fax: (615) 672 0801

Ingersoll–Rand Sales Company Limited
Chorley New Road
Horwich, Bolton
Lancashire BL6 6JN
England – UK
Tel: (44) 204 880890
Fax: (44) 204 880388

Ingersoll–Rand Equipements de Production
111 Avenuè Roger Salongro
BP 59
F–59450 Sin Le Noble
France
Tel: (33) 27 93 0808
Fax: (33) 27 93 0800

Ingersoll–Rand GmbH
Gewerbealle 17
45478 Mülhelm/Ruhr
Germany
Tel: (49) 208 9940
Fax: (49) 208 9994445

Ingersoll–Rand Italiana SpA
Casella Postale 1232
20100 Milano
Italy
Tel: (39) 2 950561
Fax: (39) 2 95380169

Ingersoll–Rand
Camino de Rejas 1, 2–18 B1S
28820 Cosiada
Spain
Tel: (34) 1 669 5850
Fax: (34) 1 669 6054

Ingersoll–Rand Nederfand
Produktieweg 10
2382 PB Zoeterwoude
Netherlands
Tel: (31) 71 45220
Fax: (31) 71 218671

Ingersoll–Rand Company SA
PO Box 3720
Airode 1451
South Africa
Tel: (27) 11 864 3930
Fax: (27) 11 864 3954

Ingersoll–Rand
Scandinavian Operations
Kastruplundgade 221
DK–2770 Kastrup
Denmark
Tel: (45) 32 526092
Fax: (45) 32 529092

Ingersoll–Rand SA
The Alpha Building
Route des Arsenaux 9
CH–1700 Fribourg
Switzerland
Tel: (41) 37 205111
Fax: (41) 37 222932

Ingersoll–RandCompany
Kuznetsky Most 21/5
Entrance 3
103698 Moscow
Russia
CIS
Tel: (7) 501 882 0440
Fax: (7) 501 882 0441

Ingersoll–Rand Company
16 Pietro
Ul Stawki 2
PL–00193 Warsaw
Poland
Tel: (48) 2 635 7245
Fax: (48) 2 635 7332