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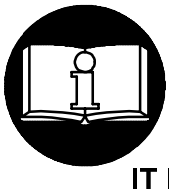
OPERATION AND MAINTENANCE MANUAL FOR MODEL 1709P1 STANDARD DUTY IMPACTOOL

NOTICE

Model 1709P1 Impactool is designed for heavy production and shop maintenance applications and light construction applications.
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.

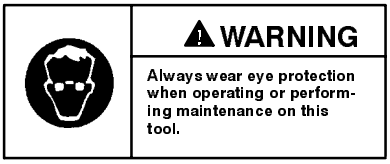
Printed in U.S.A.

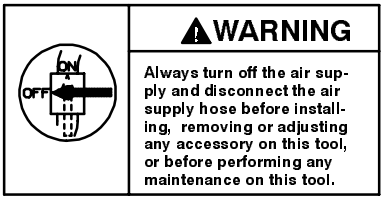
INGERSOLL-RAND®
PROFESSIONAL TOOLS

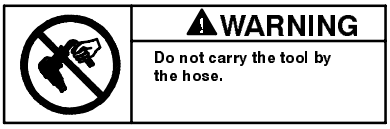
WARNING LABEL IDENTIFICATION

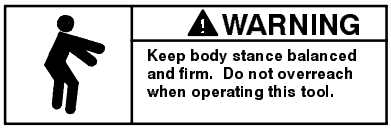
⚠ WARNING

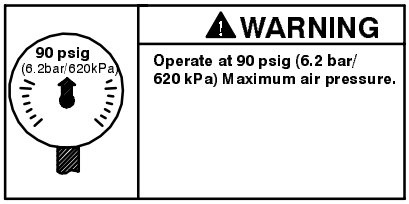
FAILURE TO OBSERVE THE FOLLOWING WARNINGS COULD RESULT IN INJURY.

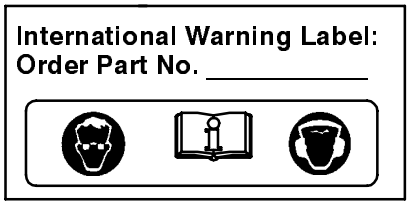












PLACING TOOL IN SERVICE

LUBRICATION

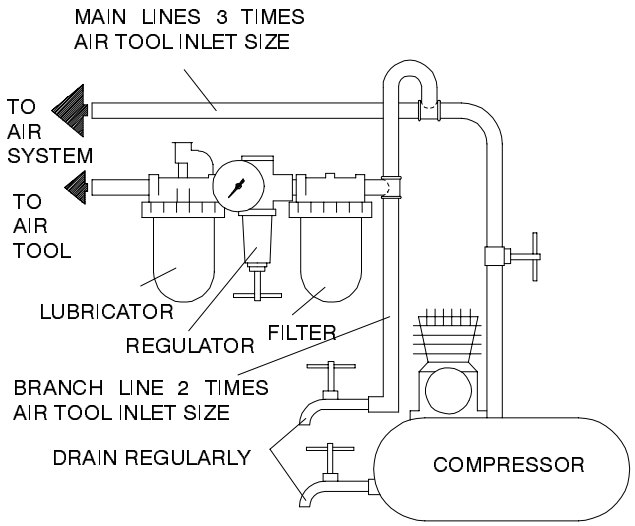
Ingersoll–Rand No. 50

Ingersoll–Rand No. 100

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

For USA – No. C31–06–G00
For International – No. FRL30–C6–A29

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)

HOW TO ORDER AN IMPACTOOL

PISTOL GRIP with 3/4" SQUARE DRIVE

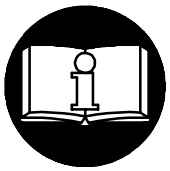
Model	Impacts/min.	Recommended Torque Range ft–lb	Nm
1709P1	1 000	75–400	102–542

MANUEL D'EXPLOITATION ET D'ENTRETIEN DE LA CLÉ A CHOCS SÉRIE STANDARD MODÈLE 1709P1 (F)

NOTE

La clé à chocs Modèle 1709P1 est destinée aux applications de production et d'entretien d'atelier et aux applications légères de construction.
Ingersoll–Rand ne peut être tenu responsable de la modification des outils par le client pour les adapter à des applications qui n'ont pas été approuvées par Ingersoll–Rand.

⚠ ATTENTION



D'IMPORTANTES INFORMATIONS DE SECURITÉ SONT JOINTES.
LIRE CE MANUEL AVANT D'UTILISER L'OUTIL.
L'EMPLOYEUR EST TENU À COMMUNIQUER LES INFORMATIONS DE CE MANUEL AUX EMPLOYÉS UTILISANT CET OUTIL.
LE NON RESPECT DES AVERTISSEMENTS SUIVANTS PEUT CAUSER DES BLESSURES.

MISE EN SERVICE DE L'OUTIL

- Toujours exploiter, inspecter et entretenir cet outil conformément au Code de sécurité des outils pneumatiques portatifs de l'American National Standards Institute (ANSI B186.1).
- Pour la sécurité, les performances optimales et la durabilité maximale des pièces, cet outil doit être connecté à une alimentation d'air comprimé de 6,2 bar (620 kPa) maximum à l'entrée, avec un flexible de 19 mm de diamètre intérieur.
- Couper toujours l'alimentation d'air comprimé et débrancher le flexible d'alimentation avant d'installer, déposer ou ajuster tout accessoire sur cet outil, ou d'entreprendre une opération d'entretien quelconque sur l'outil.
- Ne pas utiliser des flexibles ou des raccords endommagés, effilochés ou détériorés.
- S'assurer que tous les flexibles et les raccords sont correctement dimensionnés et bien serrés. Voir Plan TPD905–1 pour un exemple type d'agencement des tuyauteries.
- Utiliser toujours de l'air sec et propre à une pression maximum de 6,2 bar. La poussière, les fumées corrosives et/ou une humidité excessive peuvent endommager le moteur d'un outil pneumatique.
- Ne jamais lubrifier les outils avec des liquides inflammables ou volatiles tels que le kérosène, le gasol ou le carburant d'aviation.
- Ne retirer aucune étiquette. Remplacer toute étiquette endommagée.

UTILISATION DE L'OUTIL

- Porter toujours des lunettes de protection pendant l'utilisation et l'entretien de cet outil.
- Porter toujours une protection acoustique pendant l'utilisation de cet outil.
- Tenir les mains, les vêtements flous et les cheveux longs, éloignés de l'extrémité rotative de l'outil.
- Noter la position du levier d'inversion avant de mettre l'outil en marche de manière à savoir dans quel sens il va tourner lorsque la commande est actionnée.
- Prévoir, et ne pas oublier, que tout outil motorisé est susceptible d'à–coups brusques lors de sa mise en marche et pendant son utilisation.
- Garder une position équilibrée et ferme. Ne pas se pencher trop en avant pendant l'utilisation de cet outil. Des couples de réaction élevés peuvent se produire à, ou en dessous, de la pression d'air recommandée.
- La rotation des accessoires de l'outil peut continuer pendant un certain temps après le relâchement de la gâchette.
- Les outils pneumatiques peuvent vibrer pendant l'exploitation. Les vibrations, les mouvements répétitifs et les positions inconfortables peuvent causer des douleurs dans les mains et les bras. N'utiliser plus d'outils en cas d'inconfort, de picotements ou de douleurs. Consulter un médecin avant de recommencer à utiliser l'outil.
- Utiliser les accessoires recommandés par Ingersoll-Rand.
- N'utiliser que les douilles et les accessoires pour clés à chocs. Ne pas utiliser les douilles et accessoires (chromés) de clés manuelles.
- Les clés à chocs ne sont pas des appareils dynamométriques. Les connexions nécessitant un couple de serrage spécifique doivent être vérifiées avec un mesureur de couple après avoir été assemblées avec un clé à chocs.
- Cet outil n'est pas conçu pour fonctionner dans des atmosphères explosives.
- Cet outil n'est pas isolé contre les chocs électriques.

NOTE

L'utilisation de rechanges autres que les pièces d'origine Ingersoll–Rand peut causer des risques d'insécurité, réduire les performances de l'outil et augmenter l'entretien, et peut annuler toutes les garanties.

Les réparations ne doivent être effectuées que par des réparateurs qualifiés autorisés. Consultez votre Centre de Service Ingersoll–Rand le plus proche.

Adressez toutes vos communications au Bureau Ingersoll–Rand ou distributeur le plus proche.

Imprimé aux É.U.

INGERSOLL-RAND®
PROFESSIONAL TOOLS

SIGNIFICATION DES ETIQUETTES D'AVERTISSEMENT

⚠ ATTENTION

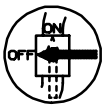
LE NON RESPECT DES AVERTISSEMENTS SUIVANTS PEUT CAUSER DES BLESSURES.

⚠ ATTENTION

Porter toujours des lunettes de protection pendant l'utilisation et l'entretien de cet outil.

⚠ ATTENTION

Porter toujours une protection acoustique pendant l'utilisation de cet outil.



⚠ ATTENTION

Couper toujours l'alimentation d'air comprimé et débrancher le flexible d'alimentation avant d'installer, déposer ou ajuster tout accessoire sur cet outil, ou d'entreprendre une opération d'entretien quelconque sur l'outil.

⚠ ATTENTION

Les outils pneumatiques peuvent vibrer pendant l'exploitation. Les vibrations, les mouvements répétitifs et les positions inconfortables peuvent causer des douleurs dans les mains et les bras. N'utiliser plus d'outils en cas d'inconfort, de picotements ou de douleurs. Consulter un médecin avant de recommencer à utiliser l'outil.

⚠ ATTENTION

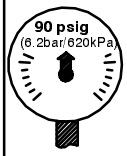
Ne pas transporter l'outil par son flexible.

⚠ ATTENTION

Ne pas utiliser des flexibles ou des raccords endommageés, effilochés ou détériorés.

⚠ ATTENTION

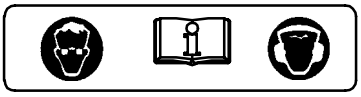
Garder une position équilibrée et ferme. Ne pas se pencher trop en avant pendant l'utilisation de cet outil.



⚠ ATTENTION

Utiliser de l'air comprimé à une pression maximum de 6,2 bar (620 kPa).

Etiquette d'avertissement internationale:
Commander Pièce No._____



MISE EN SERVICE DE L'OUTIL

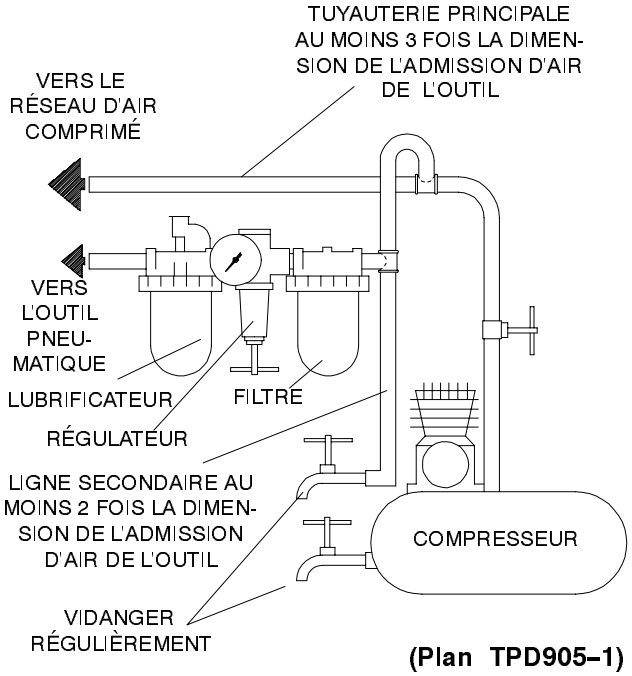
LUBRIFICATION

Ingersoll–Rand N°. 50 **Ingersoll–Rand N°. 100**

Utiliser toujours un lubrificateur avec ces outils. Nous recommandons l'emploi du filtre–régulateur–lubrificateur suivant:

USA – N°. C31–06–G00
International – N°. FRL30–C6–A29

Toutes les quarante–huit heures de fonctionnement, ou en fonction de l'expérience, injecter environ 4cm^3 de graisse Ingersoll–Rand No. 100 dans le raccord de graissage.



(Plan TPD905–1)

MANUAL DE USO Y MANTENIMIENTO PARA LA LLAVE DE IMPACTO DE SERVICIO ESTÁNDAR MODELO 1709P1

E

NOTA

La llave de impacto modelo 1709P1 está diseñada para trabajos pesados de producción y mantenimiento en el taller, así como trabajos ligeros de construcción. Ingersoll–Rand no aceptará responsabilidad alguna por la modificación de las herramientas efectuada por el cliente para las aplicaciones que no hayan sido consultadas con Ingersoll–Rand.

⚠ AVISO

**SE ADJUNTA INFORMACIÓN IMPORTANTE DE SEGURIDAD.
LEA ESTE MANUAL ANTES DE USAR LA HERRAMIENTA.
ES RESPONSABILIDAD DE LA EMPRESA ASEGURARSE DE QUE EL OPERARIO ESTÉ AL TANTO DE LA INFORMACIÓN QUE CONTIENE ESTE MANUAL.
EL HACER CASO OMISO DE LOS AVISOS SIGUIENTES PODRÍA OCASIONAR LESIONES.**

PARA PONER LA HERRAMIENTA EN SERVICIO

- Utilice, examine y mantenga siempre esta herramienta conforme al código de seguridad para herramientas neumáticas portátiles de la American National Standards Institute (ANSI B186.1).
- Para seguridad, máximo rendimiento y vida de servicio de las piezas, use esta herramienta a una presión de aire máxima de 90 psig (6,2 bar/ 620 kPa) en la manguera de suministro de aire con un diámetro interior de 19 mm.
- Corte siempre el suministro de aire y desconecte la manguera de suministro de aire antes de instalar, desmontar o ajustar cualquier accesorio de esta herramienta, o antes de realizar cualquier operación de mantenimiento de la misma.
- No utilice mangueras de aire y accesorios dañados, desgastados ni deteriorados.
- Asegúrese que todas las mangueras y accesorios sean del tamaño correcto y estén bien apretados. Vea Esq. TPD905–1 para un típico arreglo de tuberías.
- Use siempre aire limpio y seco a una presión máxima de 90 psig. El polvo, los gases corrosivos y/o el exceso de humedad podrían estropear el motor de una herramienta neumática.
- No lubrique las herramientas con líquidos inflamables o volátiles tales como queroseno, gasoil o combustible para motores a reacción.
- No saque ninguna etiqueta. Sustituya toda etiqueta dañada.

USO DE LA HERRAMIENTA

- Use siempre protección ocular cuando maneje, o realice operaciones de mantenimiento en esta herramienta.
- Use siempre protección para los oídos cuando maneje esta herramienta.
- Mantenga las manos, la ropa suelta y el cabello largo alejados del extremo giratorio de la herramienta.
- Note la posición de la palanca de inversión antes de hacer funcionar la herramienta para ser consciente de su dirección giratoria cuando funcione el estrangulador.
- Anticipe y esté alerta sobre los cambios repentinos en el movimiento durante la puesta en marcha y el manejo de toda herramienta motorizada.
- Mantenga una postura de cuerpo equilibrada y firme. No estire demasiado los brazos al manejar la herramienta. Pueden ocurrir reacciones de alto par a, o a menos de, la recomendada presión de aire.
- El eje de la herramienta podría seguir girando brevemente después de haber soltado la palanca de estrangulación.
- Las herramientas neumáticas pueden vibrar durante el uso. La vibración, repetición o posiciones incómodas pueden dañarle los brazos y manos. En caso de incomodidad, sensación de hormigueo o dolor, deje de usar la herramienta. Consulte a un médico antes de volver a usarla otra vez.
- Utilice únicamente los accesorios Ingersoll–Rand recomendados.
- Utilice únicamente bocas y accesorios para llaves de impacto. No utilice bocas o accessorios manuales (cromados).
- Las llaves de impacto no son llaves de par. Las uniones que requieran pares específicos deberán ser comprobadas con un torsiómetro después de haberlas fijado con una llave de impacto.
- Cet outil n'est pas conçu pour fonctionner dans des atmosphères explosives.
- Cet outil n'est pas isolé contre les chocs électriques.

NOTA

El uso de piezas de recambio que no sean las auténticas piezas Ingersoll–Rand podría poner en peligro la seguridad, reducir el rendimiento de la herramienta y aumentar los cuidados de mantenimiento necesarios, así como invalidar toda garantía.

Las reparaciones sólo serán realizadas por personal cualificado y autorizado. Consulte con el centro de servicio Ingersoll–Rand autorizado más próximo.

Toda comunicación se deberá dirigir a la oficina o al distribuidor Ingersoll–Rand más próximo.

Impreso en EE. UU.

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ETIQUETAS DE AVISO

⚠ AVISO

EL HACER CASO OMISO DE LOS AVISOS SIGUIENTES PODRÍA OCASIONAR LESIONES.

⚠ ADVERTENCIA

Usar siempre protección ocular al manejar o realizar operaciones de mantenimiento en esta herramienta.

⚠ ADVERTENCIA

Las herramientas neumáticas pueden vibrar durante el uso. La vibración, los movimientos repetitivos o las posiciones incómodas podrían dañarle los brazos y las manos. En caso de incomodidad, sensación de hormigueo o dolor, dejar de usar la herramienta. Consultar al médico antes de volver a utilizarla.

⚠ ADVERTENCIA

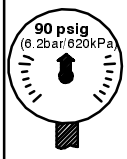
Mantener una postura del cuerpo equilibrada y firme. No estirar demasiado los brazos al manejar la herramienta.

⚠ ADVERTENCIA

Usar siempre protección para los oídos al manejar esta herramienta.

⚠ ADVERTENCIA

No coger la herramienta por la manguera para levantarla.



⚠ ADVERTENCIA

Manejar la herramienta a una presión de aire máxima de 90 psig (6,2 bar/620 kPa).

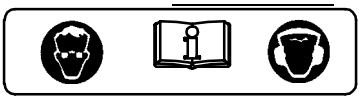
⚠ ADVERTENCIA

Cortar siempre el suministro de aire y desconectar la manguera de suministro de aire antes de instalar, retirar o ajustar cualquier accesorio de esta herramienta, o antes de realizar cualquier operación de mantenimiento de la misma.

⚠ ADVERTENCIA

No utilizar mangueras de aire y accesorios dañados, desgastados ni deteriorados.

Etiqueta de Aviso Internacional:
Pida Pieza No. _____



PARA PONER LA HERRAMIENTA EN SERVICIO

LUBRICACIÓN

Ingersoll–Rand Nº 50

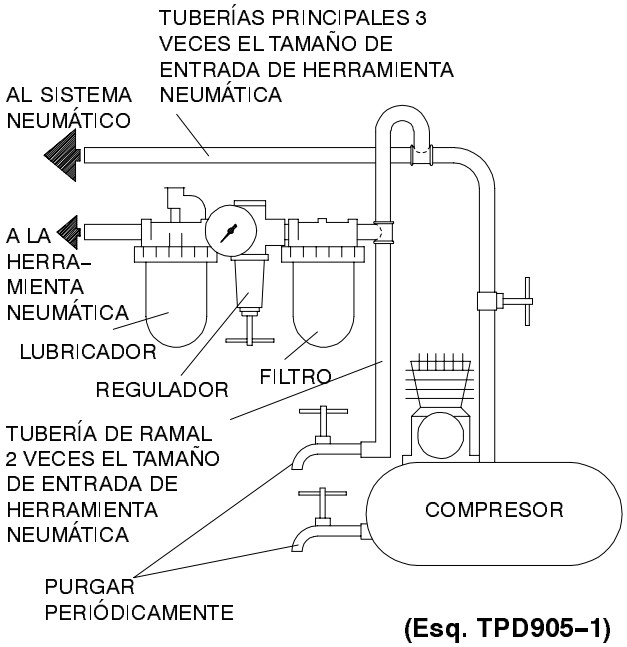
Ingersoll–Rand Nº 100

Utilice siempre un lubricador de aire comprimido con estas llaves de impacto. Recomendamos la siguiente unidad de Filtro–Lubricador–Regulador:

USA – Nº C31–06–G00
Internacional – Nº. FRL30–C6–A29

Después de cada ocho horas de funcionamiento, salvo que se utilice un lubricador de aire comprimido, quite el tapón de la cámara de aceite y llene ésta con el Aceite Ingersoll–Rand Nº 50.

Después de cada cuarenta y ocho horas de funcionamiento o según indique la experiencia, inyecte unos 4 cc de Grasa Ingersoll–Rand Nº 100 en el Engrasador.



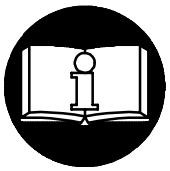
(Esq. TPD905–1)

MANUAL DE FUNCIONAMENTO E MANUTENÇÃO PARA A FERRAMENTA DE PERCUSSÃO PARA TRABALHO NORMAL MODELO 1709P1 (P)

AVISO

A Ferramenta de Percussão Modelo 1709P1 é concebida para aplicações pesadas de produção e de oficina de manutenção e para aplicações de construção ligeiras.

A Ingersoll–Rand não é responsável por modificações, feitas pelo cliente em ferramentas, nas quais a Ingersoll–Rand não tenha sido consultada.



⚠ ADVERTÊNCIA

INFORMAÇÃO DE SEGURANÇA IMPORTANTE EM ANEXO
LEIA ESTE MANUAL ANTES DE OPERAR A FERRAMENTA.
É DA RESPONSABILIDADE DO EMPREGADOR COLOCAR A INFORMAÇÃO DESTE MANUAL NAS MÃOS DO OPERADOR.
O NÃO CUMPRIMENTO DAS SEGUINTES ADVERTÊNCIAS PODE RESULTAR EM FERIMENTOS.

COLOCANDO A FERRAMENTA EM FUNCIONAMENTO

- Sempre opere, inspeccione e mantenha esta ferramenta de acordo com o Código de Segurança do Instituto Americano de Padrões Nacionais para Ferramentas Pneumáticas Portáteis (ANSI B186.1).
- Para segurança, máximo desempenho e máxima durabilidade das peças, opere esta ferramenta com uma pressão de ar máxima de 6,2 bar/620 kPa (90 psig) na entrada da mangueira de alimentação de ar com diâmetro interno de 10 mm (3/4").
- Desligue sempre a alimentação de ar e desconecte a mangueira de alimentação de ar antes de instalar, remover ou ajustar qualquer acessório nesta ferramenta, ou antes de executar qualquer serviço de manutenção nesta ferramenta.
- Não use mangueiras de ar ou adaptadores danificados, gastos ou deteriorados.
- Certifique–se de que todas as mangueiras e adaptadores sejam do tamanho correcto e estejam apertados com firmeza. Veja o Desenho TPD905–1 para um arranjo típico de tubagem.
- Use sempre ar seco e limpo com pressão máxima de 90 psig. Pó, fumos corrosivos e/ou humidade excessiva podem arruinar o motor de uma ferramenta pneumática.
- Não lubrifique as ferramentas com líquidos inflamáveis ou voláteis tais como querosene, diesel ou combustível de jactos.
- Não remova nenhum rótulo. Reponha qualquer rótulo danificado.

USANDO A FERRAMENTA

- Use sempre óculos de protecção quando estiver operando ou executando serviço de manutenção nesta ferramenta.
- Use sempre protecção contra ruído ao operar esta ferramenta.
- Mantenha as mãos, partes do vestuário soltas e cabelos compridos afastados da extremidade em rotação.
- Observe qual é a posição da alavanca que reverte o sentido de rotação antes de operar esta ferramenta de modo a estar atento ao sentido de rotação quando operar o regulador de pressão.
- Antecipe e esteja alerta a mudanças repentinas no movimento quando ligar e operar qualquer ferramenta motorizada.
- Mantenha a posição do corpo equilibrada e firme. Não exagere quando operar esta ferramenta. Torques de reacção elevados podem ocorrer na ou abaixo da pressão de ar recomendada.
- O eixo da ferramenta pode continuar a girar brevemente após a pressão tenha sido aliviada.
- Ferramentas accionadas pneumáticamente podem vibrar em uso. Vibração, movimentos repetitivos ou posições desconfortáveis podem ser prejudiciais às mãos e aos braços. Pare de usar a ferramenta caso ocorra algum desconforto, sensação de formigueiro ou dor. Procure assistência médica antes de retornar ao trabalho.
- Use acessórios recomendados pela Ingersoll–Rand.
- Use somente soquetes e acessórios de impacto. Não use soquetes ou acessórios de mão (cromo).
- Ferramentas Pneumáticas de impacto não são chaves dinamométricas de torque. As conexões que requerem um torque específico devem ser verificadas com um torquímetro depois de adaptadas a uma chave dinamométrica de impacto.
- Esta Ferramenta não foi concebida para trabalhos em atmosferas explosivas.
- Esta Ferramenta não está isolada contra choques eléctricos.

AVISO

O uso de peças de substituição que não sejam genuinamente da Ingersoll–Rand podem resultar em riscos de segurança, diminuição do desempenho da ferramenta, aumento da necessidade de manutenção e pode invalidar todas as garantias.

As reparações devem ser feitas somente por pessoal treinado autorizado. Consulte o Centro de Serviços da Ingersoll–Rand mais próximo.

Envie Todos os Comunicados Para o Distribuidor ou Escritório da Ingersoll–Rand Mais Próximo.

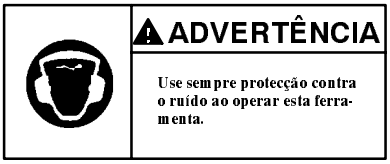
Impresso nos E.U.A.

INGERSOLL-RAND®
PROFESSIONAL TOOLS

IDENTIFICAÇÃO DO RÓTULO DE ADVERTÊNCIA

⚠ ADVERTÊNCIA

O NÃO CUMPRIMENTO DAS SEGUINTES ADVERTÊNCIAS PODE RESULTAR EM FERIMENTO.



COLOCANDO A FERRAMENTA EM FUNCIONAMENTO

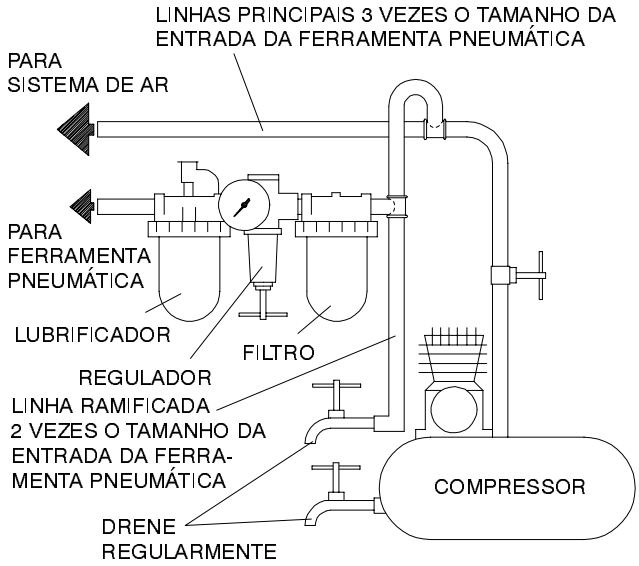
LUBRIFICAÇÃO

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

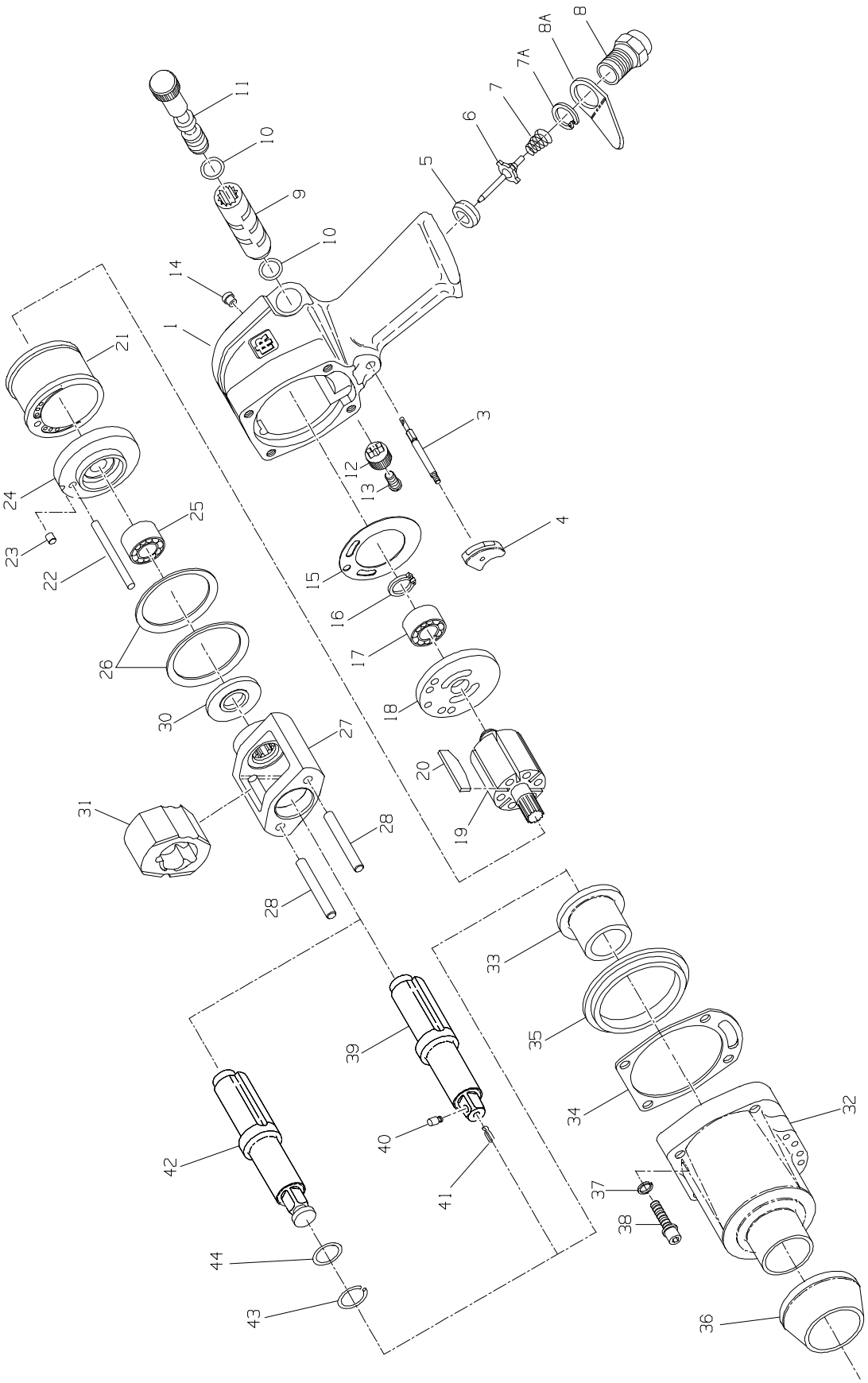
Use sempre um lubrificador de ar de linha com estas ferramentas. Nós recomendamos a seguinte Unidade Filtro–Lubrificador–Regulador :

Para USA - No. C31–06–G00
Para Internacional - No. FRL30–C6–A29

Depois de cada 48 horas de operação, ou conforme a experiência indica, injecte aproximadamente 4 cc de Massa Lubrificante Ingersoll–Rand No. 100 no Adaptador de Massa Lubrificante.



(Desenho TPD905–1)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(Dwg. TPA839–4)

			PART NUMBER FOR ORDERING
	1	Motor Housing Assembly	1709–A40
		Trigger Assembly	7AH–A93
	3	Trigger Pin	7AH–94
	4	Trigger	5RA–93
♦	5	Throttle Valve Seat	2908–303
♦	6	Throttle Valve	LG2–302
♦	7	Throttle Valve Spring	1709–51
	7A	Throttle Valve Retaining Ring	2908–304
	8	Air Strainer Assembly	8O4–465
	8A	Handle Plate	1709–231
	9	Reverse Valve Bushing Assembly	2908–A330
♦ •	10	Reverse Valve Bushing Seal (2)	AF120–290
	11	Reverse Valve	1709–329
	12	Reverse Valve Knob	231–666
	13	Reverse Valve Knob Screw	231–665
	14	Grease Fitting	130SR–188
♦ •	15	End Plate Gasket	2908–283
♦	16	Rear Rotor Bearing Retainer	R4800–119
♦	17	Rear Rotor Bearing	R1A–510
•	18	Rear End Plate	2908–12
♦ •	19	Rotor	2908–53
♦ •	20	Vane Packet (set of 6 Vanes)	2908–42–6
	21	Cylinder	908–3
	22	Cylinder Dowel	403–98A
	23	Front End Plate Dowel	230–74
•	24	Front End Plate	2908–11
♦	25	Front Rotor Bearing	R38P–606
	26	Motor Clamp Washer (2)	2908–207
	27	Hammer Frame Assembly	1709–A703A
	28	Hammer Pin (2)	2908–704

			PART NUMBER FOR ORDERING
	30	Hammer Frame Rear Washer	2908–706
	31	Hammer	1709–724A
	32	Hammer Case Assembly	1709–A727
	33	Hammer Case Bushing	2908–641
♦ •	34	Hammer Case Gasket	1709–36
	35	Hammer Case Pilot	2908–800
	*	Hammer Case Label	WARNING–2–99
	36	Hammer Case Shield	1709–109
	37	Hammer Case Lock Washer (4)	8U–58
	38	Hammer Case Cap Screw (4)	R0H–354
	39	3/4" Square Drive Anvil (with Pin–Type Retainer)	
		Standard Length	1709–P826
		6" Extended	1709–P826–6
	40	Socket Retaining Pin	2908–716
	41	Socket Retaining Pin Spring	5UHD–718
	42	3/4" Square Drive Anvil (with Ring–Type Retainer)	
		Standard Length	250–A826
		6" Extended	250–A826–6
•	43	Socket Retainer	908B5–918
•	44	Retainer Ring	AF120–289
	*	Quick Change Chuck Assembly (for 5/8" hex shank accessories)	510–A925–10
	*	Nameplate	1709–301
	*	Grease Gun	R000A2–228
	*	Tune–up Kit (includes illustrated parts 5, 6, 7, 10[2], 15, 16, 17, 20, 25 and 34)	1709P–TK2

* Not illustrated.

• 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.

♦ Indicates Tune–up Kit part.

MAINTENANCE SECTION

⚠ WARNING

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

LUBRICATION

Each time Model 1709P1 Impactool is disassembled for maintenance and repair or replacement of parts, lubricate the tool as follows:

1. Work approximately 6 to 8 cc of Ingersoll–Rand No. 100 Grease into the impact mechanism, particularly around the Hammer Pins (28), Hammer (31), Hammer Frame (27), Anvil (42 or 39) and inside the Hammer Case Bushing (33).
2. Work some Ingersoll–Rand No. 100 Grease into the Rotor Bearings (17 and 25).
3. Inject approximately 4 cc of Ingersoll–Rand No. 100 Grease into the Grease Fitting (14).
4. Wipe a thin film of Ingersoll–Rand No. 50 Oil on the Rotor (19), Vanes (20), Reverse Valve (11), End Plates (18 and 24) and the bore of the Cylinder (21).
5. Use Ingersoll–Rand No. 50 Oil for lubricating the motor. Inject approximately 1 to 2 cc of oil into the air inlet before attaching the 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 replacements.

Disassembly the Impactool

1. Clamp the handle of the tool in a vise with with leather–covered or copper–covered jaws with the square driver upward.
2. Unscrew and remove the Hammer Case Cap Screws (38). Remove the Hammer Case Lock Washers (37).
3. While lightly tapping on the end of the Anvil (39 or 42) with a plastic hammer, lift off the Hammer Case (32). Remove the Hammer Case Gasket (34).
4. Grasp the Anvil and lift it from the impact mechanism, making certain not to drop the Hammer Pins (28).

Disassembly of the Impact Mechanism

1. Set the mechanism, driver end up, on a workbench.
2. Slide the Hammer (31) from the Hammer Frame (27).
3. Lift off the Hammer Frame and the two Hammer Pins (28).
4. Lift off the Hammer Frame Washer (30).

Disassembly of the Reverse Valve

1. Unscrew the Reverse Valve Knob Screw (13) and remove the Reverse Valve Knob (12).

NOTICE

This screw is installed with Loctite®* You may have to heat the screw slightly to loosen it.

2. While slowly rotating the Reverse Valve (11), withdraw it from the Reverse Valve Bushing (9).

Disassembly of the Motor

1. Lift off the two Motor Clamp Washers (26).
2. Grasp the splined end of the Rotor (19) and pull the entire motor from the Housing.
3. Slide the Front End Plate (24) along with the Front Rotor Bearing (25) from the Rotor (19). Withdraw the Cylinder (21) and Vanes (20).
4. Remove the Rear Rotor Bearing Retainer (16).
5. Withdraw the Rear End Plate (18) along with the Rear Rotor Bearing (17) from the rear hub of the Rotor.
6. Remove the End Plate Gasket (15).
7. Replace the Vanes (20) if they are cracked, chipped or worn. Always replace Vanes in sets.
8. Replace the End Plates (18 and 24) if they are deeply scored.
9. Replace the Cylinder (21) if it is cracked, or if its bore is wavy or rough.
10. Replace the Rotor (19) if the spline is damaged.
11. Replace the Rotor Bearings (17 and 25) if they are rough or loose.

* Product of Loctite Corporation.

Disassembly of the Throttle Mechanism

1. Grasp the grip area of the Motor Housing firmly in a vise with leather–covered or copper–covered jaws and remove the Air Strainer Assembly (8), Handle Plate (8A), Throttle Valve Retaining Ring (7A), Throttle Valve Spring (7), Throttle Valve (6) and Throttle Valve Seat (5).
2. If necessary, remove the Trigger Assembly and remove the Trigger (4) from the Trigger Pin (3).

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 pressing the bearing into a bearing recess.
3. Whenever grasping a tool or part in a vise, always use leather–covered or copper–covered vise jaws. Take extra care with threaded parts or 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 Throttle Mechanism

1. If the Throttle Valve Seat (5) was removed from the handle, install a new Throttle Valve Seat by pushing it into place with a 1/2" (13 mm) diameter dowel.
2. Install the Trigger (4) on the Trigger Pin (3) and insert the Trigger Assembly into the Motor Housing Assembly (1).
3. Insert the Throttle Valve (6), long stem first, into the bottom of the handle so that the valve stem engages the hole in the Trigger Pin (3).
4. Insert the Throttle Valve Spring (7), small end first, and install the Throttle Valve Retaining Ring (7A).
5. Place the Handle Plate (8A) on the bottom of the handle, and install the Air Strainer Assembly. Tighten it between 45 and 50 ft–lb (61 and 67.8 Nm) torque.

Assembly of the Reverse Valve

1. Dampen the two Reverse Valve Bushing Seals (10) with O–ring lubricant and install the seals in their respective grooves in the Reverse Valve Bushing.
2. Dampen the Reverse Valve (11) with light oil. With the tool in a horizontal position, handle downward, and while facing the back end of the tool, insert the Reverse Valve from left to right into the Reverse Valve Bushing (9). Slowly rotate the Valve while doing this to avoid damage to the Seals.
3. Attach the Reverse Valve Knob (12) to the Reverse Valve with the Reverse Valve Knob Screw (13).

NOTICE

Apply Loctite No. 601®* to the threads of the Screw before installation. Tighten the Screw between 60 and 70 in–lb (6.75 and 8.15 Nm) torque.

Assembly of the Motor

1. Using a sleeve that will contact only the outer ring of the bearing, press the Front Rotor Bearing (25) into the Front End Plate (24) and the Rear Rotor Bearing (17) into the Rear End Plate (18).
2. Slip the Front End Plate and Bearing over the splined hub of the Rotor (19).
3. Grasp the splined hub of the Rotor in copper–covered vise jaws so that the Rotor is in a vertical position.
4. Dampen each Vane (20) with light oil and insert a Vane into each vane slot.
5. Set the Cylinder (21) over the Rotor and onto the Front End Plate.
6. Slide the Rear End Plate and Bearing onto the rotor hub and against the Cylinder.
7. Install the Rear Rotor Bearing Retainer (16) in the groove on the rotor hub.
8. Align the dowel hole in both End Plates with the one through the Cylinder, and insert a guide rod 3/16" diameter x 6" long (4.7 mm diameter x 152 mm long). Allow the rod to protrude from the Rear End Plate.
9. Grasp the handle of the Motor Housing (1) in leather–covered or copper–covered vise jaws so that the bore of the Motor Housing is horizontal.
10. Wipe a thin film of light grease on the End Plate Gasket (15) and press the Gasket firmly against the Rear End Plate.
11. Insert the protruding end of the guide rod into the dowel hole in the bore of the Motor Housing, and slide the motor along the rod until it is completely seated.
12. Remove the guide rod and replace it with the Cylinder Dowel (22). Install the Front End Plate Dowel (23) in the matching notches of the Front End Plate and Motor Housing.
13. Reposition the Motor Housing in the vise so that the open face of the Motor Housing is upward.

* Product of Loctite Corporation.

14. Place the two Motor Clamp Washers (26), convex side first, against the Front End Plate so that the inner ring of the leading Washer contacts the End Plate and the trailing Washer contacts the Hammer Case Pilot (35).
15. Place the Hammer Frame Rear Washer (30) over the hub of the Rotor and against the Front Rotor Bearing.

Assembly of the Impact Mechanism

1. Coat the spline and the pin holes of the Hammer Frame (27) with a light film of lngersoll–Rand No. 100 Grease.
2. Install the Hammer Frame on the splined hub of the Rotor.
3. Coat the Hammer (31) with a light film of Ingersoll–Rand No. 100 Grease and slide the Hammer inside the Hammer Frame.
4. Coat the Hammer Pins (28) with a light film of Ingersoll–Rand No. 100 Grease.
5. Install the Pins in the holes in the Hammer Frame so that they engage the notches in the Hammer.
6. Coat the Anvil (39 or 41) with a light film of Ingersoll–Rand No. 100 Grease. Enter the Anvil into the Hammer Frame and through the Hammer until it seats

Assembly of the Impactool

1. Smear a thin film of Ingersoll–Rand No. 100 Grease on the inside surface of the Hammer Case Bushing (33), and place the Hammer Case (32) down over the Anvil and against the Housing.
2. Install the Hammer Case Cap Screws (38) and Lock Washers (37). Tighten the Hammer Case Cap Screws alternately a little at a time, then to a final torque between 14 and 17 ft–lb (19 and 23 Nm).

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 clean, 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.

NOTES