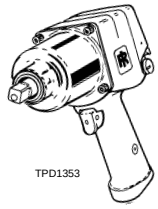


03534195
Form P6750
Edition 9
July, 1999

F
E
P

OPERATION AND MAINTENANCE MANUAL FOR SERIES 2906P SUPER DUTY IMPACTOOLS

NOTICE

Series 2906P Impactools are designed for use in light assembly work and machinery maintenance.

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 American National Standards Institute Safety Code for Portable Air Tools (ANSI B186.1).**
- **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 3/8" (10 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.

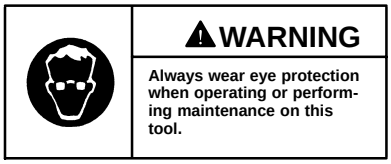
Printed in U.S.A.

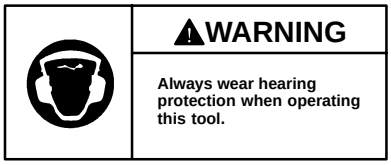
INGERSOLL-RAND®
PROFESSIONAL TOOLS

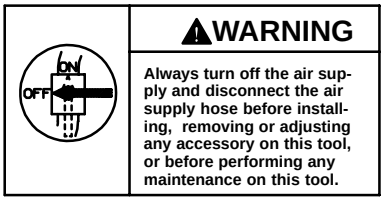
WARNING LABEL IDENTIFICATION

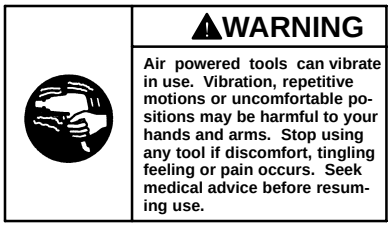
⚠ WARNING

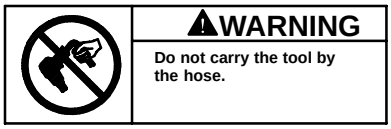
FAILURE TO OBSERVE THE FOLLOWING WARNINGS COULD RESULT IN INJURY.

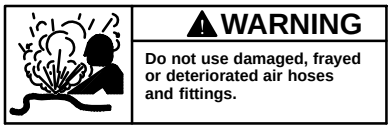


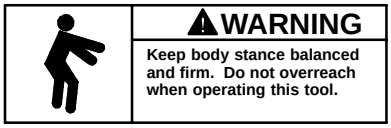


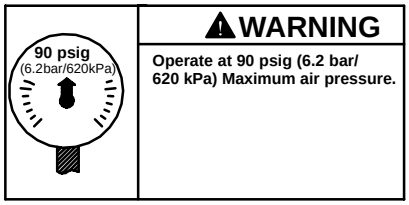












ADJUSTMENTS

SETTING THE POWER REGULATOR

⚠ WARNING

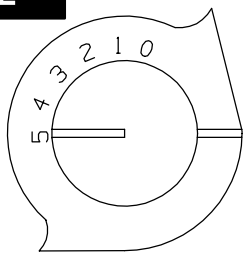
Impact wrenches are not torque control devices. Fasteners with specific torque requirements must be checked with suitable torque measuring devices after installation with an impact wrench.

Series 2906P Impactools incorporate a power regulator into the reverse mechanism that allows the operator to have either full power output in one direction and reduced power output in the other direction or full power output in both directions. To adjust the power, proceed as follows:

For full power in both directions, rotate the reverse valve until the notch on each end of the reverse valve aligns with the number 5 on each side of the housing.

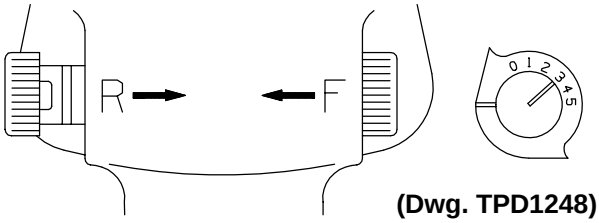
NOTICE

The numbers 0 thru 5 on the housing are only for reference and DO NOT denote a specific power output. Zero (0) designates the lowest power output while five (5) denotes the highest.



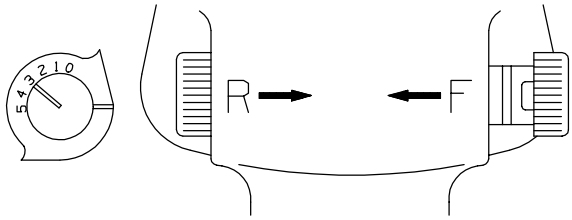
(Dwg. TPD1247)

For reduced power in the forward direction and full power in the reverse direction, push the reverse valve inward on the right side of the tool and rotate the reverse valve until the notch on the right side aligns with the desired number on the right side. This provides reduced power in forward but full power in reverse when the reverse valve is pushed in the opposite direction. See Dwg. TPD1248.



(Dwg. TPD1248)

For reduced power in the reverse direction and full power in the forward direction, push the reverse valve inward on the left side of the tool and rotate the reverse valve until the notch on the left side aligns with the desired number on the left side. This provides full power in forward but reduced power in reverse when the reverse valve is pushed the opposite direction. See Dwg. TPD1249.



(Dwg. TPD1249)

PLACING TOOL IN SERVICE

LUBRICATION

Ingersoll–Rand No. 50

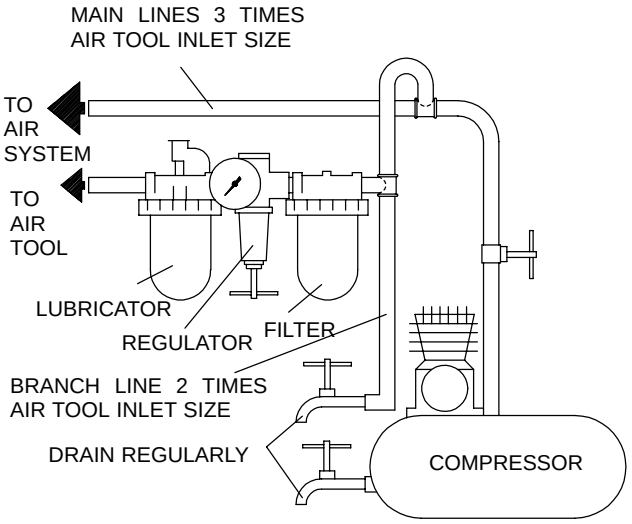
Ingersoll–Rand No. 100

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

For USA – No. C28–04–FKG0–28

After each eight hours of operation, unless an air line lubricator is used, remove the Oil Chamber Plug (4) and fill the oil chamber with Ingersoll–Rand No. 50 Oil.

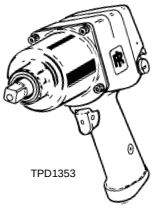
After each forty–eight hours of operation, or as experience indicates, inject about 4 cc of Ingersoll–Rand No. 100 Grease into the Grease Fitting (25).



(Dwg. TPD905–1)

HOW TO ORDER AN IMPACTOOL

PISTOL GRIP WITH 1/2" SQUARE DRIVE			
		Recommended Torque Range	
Model	**Impacts/min.**	**ft–lb**	**Nm**
2906P1	5,000	40 – 350	54.2 – 475
PISTOL GRIP WITH 7/16" HEX DRIVE and QUICK–CHANGE ANVIL			
2906P7	5,000	40 – 310	54.2 – 420

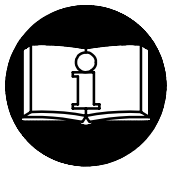


MODE D'EMPLOI DES CLÉS À CHOCS À HAUTE PERFORMANCE SÉRIE 2906P

F

NOTE

Les clés à chocs de la série 2906P sont destinés aux travaux de montage léger et à l'entretien des machines.
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 10 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.

Refer All Communications to the Nearest 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

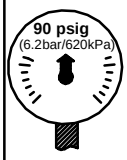
Ne pas transporter l'outil par son flexible.

⚠ 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).

RÉGLAGES

REGLAGE DU REGULATEUR DE PUISSANCE

⚠ ATTENTION

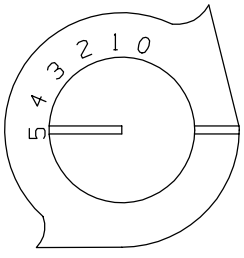
Les clés à chocs ne sont pas des appareils dynamométriques. Les fixations nécessitant un couple de serrage spécifique doivent être vérifiées avec des appareils de mesure de couple appropriés après avoir été assemblées avec une clé à chocs.

Les clés à chocs de la série 2906P comportent un régulateur de puissance dans leur mécanisme d'inversion de manière à ce que l'opérateur puisse avoir soit une pleine puissance dans une direction et une puissance réduite dans l'autre, soit une pleine puissance dans les deux directions. Pour ajuster la puissance, procéder comme suit :

Pour obtenir la pleine puissance dans les deux directions, tourner la soupape d'inversion jusqu'à ce que l'encoche aux deux extrémités de la soupape d'inversion soient alignées par rapport au numéro 5 de chaque côté du carter.

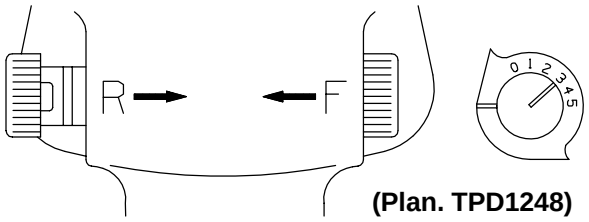
NOTE

Les numéros 0 à 5 du carter ne sont donnés qu'à titre de guide et NE dénotent PAS une puissance spécifique. Zéro (0) indique la puissance la plus faible tandis que cinq (5) indique la puissance la plus élevée.



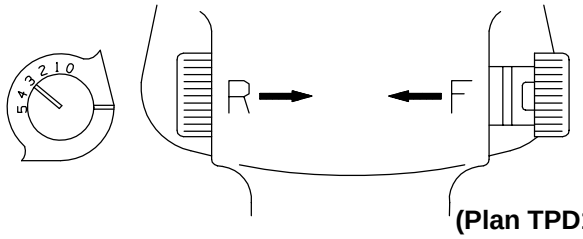
(Plan TPD1247)

Pour obtenir une puissance réduire dans le sens avant et la pleine puissance dans le sens arrière, pousser la soupape d'inversion vers l'intérieur sur le côté droit de l'outil et tourner la soupape d'inversion jusqu'à ce que l'encoche du côté droit de la soupape soit alignée par rapport au numéro désiré sur le côté droit. Ce réglage fournit une puissance réduite dans le sens avant, mais une pleine puissance dans le sens arrière lorsque la soupape d'inversion est poussée dans la direction opposée. Voir Plan TPD1248.



(Plan. TPD1248)

Pour obtenir une puissance réduite dans le sens arrière et la pleine puissance dans le sens avant, pousser la soupape d'inversion vers l'intérieur sur le côté gauche de l'outil et tourner la soupape d'inversion jusqu'à ce que l'encoche du côté gauche de la soupape soit alignée par rapport au numéro désiré sur le côté gauche. Ce réglage fournit la pleine puissance dans le sens avant, mais une puissance réduite dans le sens arrière lorsque la soupape d'inversion est poussée dans la direction opposée. Voir Plan TPD1249.



(Plan TPD1249

MISE EN SERVICE DE L'OUTIL

LUBRIFICATION

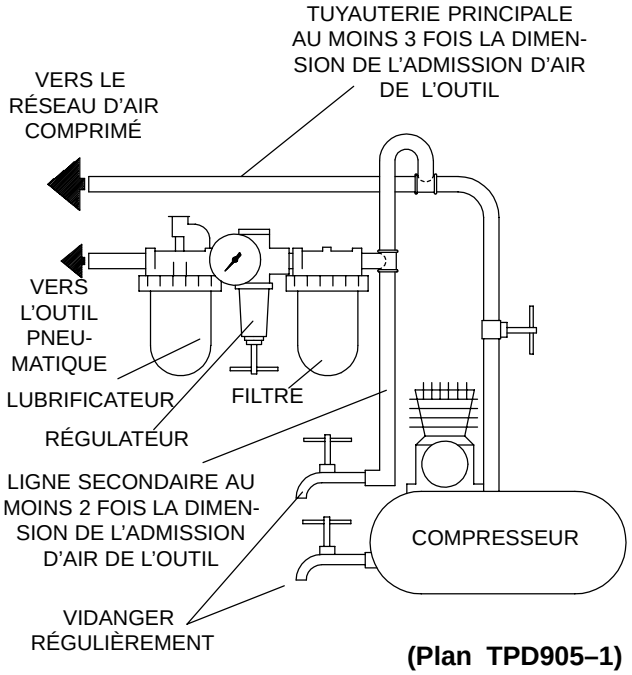
Ingersoll–Rand Nº. 50 **Ingersoll–Rand Nº. 100**

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

Pour E.U.A. – Nº. C28–04–FKG0–28

Toutes les huit heures de fonctionnement, si un lubrificateur de ligne n'est pas utilisé, déposer le bouchon de la chambre d'huile et remplir cette dernière avec de l'huile Ingersoll–Rand No. 50.

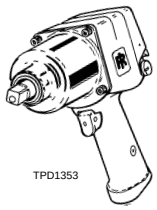
Toutes les quarante–huit heures de fonctionnement, ou en fonction de l'expérience, injecter environ 4cm^3 de graisse Ingersoll–Rand No. 100 dans le raccord de graissage.



(Plan TPD905–1)

SPÉCIFICATIONS

Modèle	Poignée à levier	Entraînement	Coups par minute	Gamme de couples recommandée
		in.		**ft–lbs (Nm)**
2906P1	pistolet	1/2" carré	1.200	40–350 (54,2–475)
2906P7	pistolet	7/16" hex recess	1.200	40–350 (54,2–475)

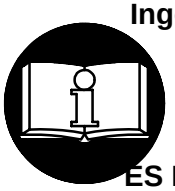


INSTRUCCIONES PARA LLAVES DE IMPACTO INDUSTRIALES MODELO 2906P

E

NOTA

La llave de impacto Modelo 2906P está diseñada para usar en trabajos ligeros de montaje y mantenimiento de maquinaria.
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 10 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.**
- **Esta herramienta no ha sido diseñada para trabajar en ambientes explosivos.**
- **Esta herramienta no está aislada contra descargas eléctricas.**

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.

Refer All Communications to the Nearest

Impreso en EE. UU.

INGERSOLL-RAND®
PROFESSIONAL TOOLS

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

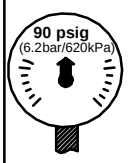
Mantener una postura del cuerpo equilibrada y firme. No estirar demasiado los brazos al manejar la herramienta.

⚠ ADVERTENCIA

Usar siempre protección para los oídos al manejar esta herramienta.

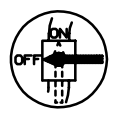
⚠ ADVERTENCIA

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.

AJUSTES

COLOCACIÓN DE REGULADOR DE POTENCIA

⚠ AVISO

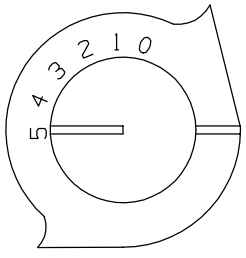
Las llaves de impacto no son llaves de control de par. Los fijadores con específico requerimiento de par deberán ser comprobados con un torsiómetro adecuado después de su fijación con una llave de impacto.

Las Llaves de Impacto Modelo 2906P incorporan un regulador de potencia en el mecanismo de inversión, que permite al operario obtener potencia completa en una dirección y potencia reducida en la otra dirección o potencia completa en ambas direcciones. Para ajuste de potencia, proceda como sigue:

Para potencia completa en ambas direcciones, gire la válvula de inversión hasta que la marca en cada extremo de válvula esté alineada con el número 5 en cada lateral de carcasa.

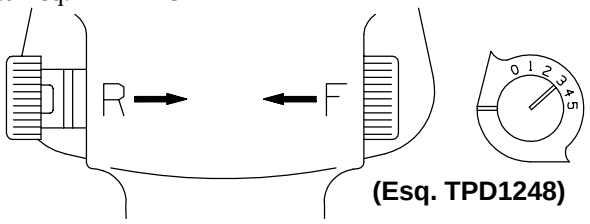
NOTA

Los números del 0 al 5 que hay en la carcasa son sólo de referencia y NO indican una potencia específica. Cero (0) indica la potencia menor mientras que cinco (5) indica la mayor.



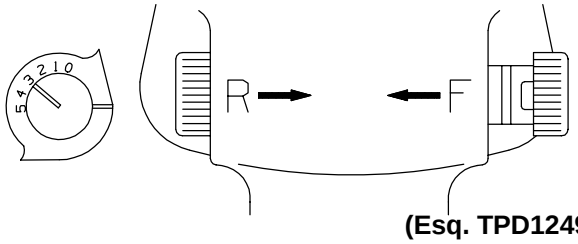
(Esq. TPD1247)

Para potencia reducida en dirección hacia delante y potencia completa en la dirección inversa, empuje hacia adentro la válvula de inversión situada en el lateral derecho de la herramienta y gírela hasta que la marca en el lateral derecho esté alineada con el número deseado en la derecha. Esto ofrece potencia reducida en dirección hacia delante y potencia completa en la dirección inversa cuando la válvula de inversión sea empujada hacia el lado opuesto.
Vea Esq. TPD1248



(Esq. TPD1248)

Para potencia reducida en la dirección inversa y completa en la dirección hacia delante, empuje hacia adentro la válvula de inversión situada en el lateral derecho de la herramienta y gírela hasta que la marca en el lateral izquierdo esté alineada con el número deseado en la izquierda. Esto ofrece potencia completa en la dirección hacia delante y potencia reducida en la dirección inversa cuando la válvula de inversión sea empujada hacia el lado opuesto. Vea Esq.
TPD1249.



(Esq. TPD1249)

PARA PONER LA HERRAMIENTA EN SERVICIO

LUBRICACIÓN

Ingersoll–Rand Nº 50

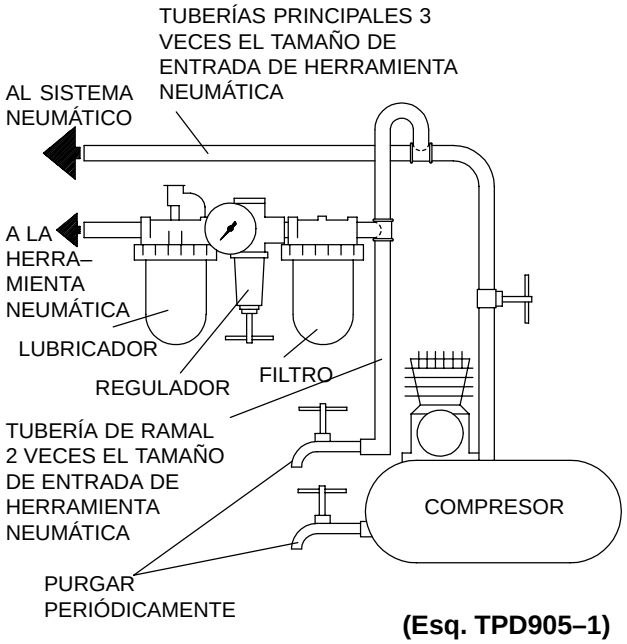
Ingersoll–Rand Nº 100

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

Para EE.UU. – Nº. C28–04–FKG0–28

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.

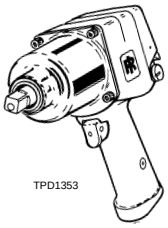
Después de cada cuarenta y ocho horas de funcionamiento o según indique la experiencia, inyecte unos 4 cc de Grasa Ingersoll–Rand Nº 100 en el Engrasador.



(Esq. TPD905–1)

ESPECIFICACIONES

Modelo	Tipo de Empuñadura	Accionamiento	Impactos por minuto	Gama de par recomendada
		pulg.		**ft–lbs (Nm)**
2906P1	pistola	1/2” cuadradillo	1.200	40–350 (54,2–475)
2906P7	pistola	receso hexagonal de 7/16”	1.200	40–350 (54,2–475)



INSTRUÇÕES PARA FERRAMENTAS PNEUMÁTICAS DE IMPACTO PARA TRABALHOS PESADOS SÉRIE 2906P

P

AVISO

As Ferramentas Pneumáticas de Impacto Série 2906P são concebidas para uso em trabalhos de montagem ligeira e manutenção de equipamentos.
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 (3/8”).**
- **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.

Refer All Communications to the Nearest

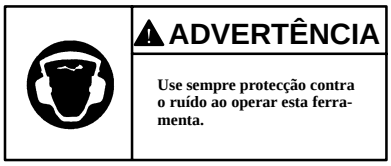
Impresso nos E.U.A.

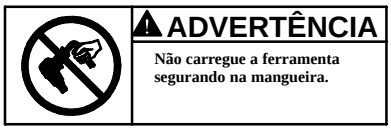
INGERSOLL-RAND®
PROFESSIONAL TOOLS

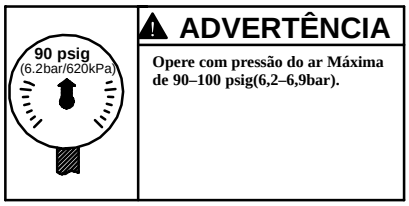
IDENTIFICAÇÃO DO RÓTULO DE ADVERTÊNCIA

⚠ ADVERTÊNCIA

O NÃO CUMPRIMENTO DAS SEGUINTES ADVERTÊNCIAS PODE RESULTAR EM FERIMENTO.







AJUSTES

AJUSTANDO O REGULADOR DE POTÊNCIA

⚠ ADVERTÊNCIA

Ferramentas pneumáticas não são aparelhos de controlo de torque. Apertos com requisitos de torque específicos devem ser verificados com aparelhos de medição de torque adequados depois da instalação de uma chave dinamométrica.

As Ferramentas Pneumáticas de Impacto Série 2906P incorporam um mecanismo regulador de potência no mecanismo de reversão que permite ao operador regular a potência máxima de saída num sentido e a potência mínima de saída no outro sentido, ou potência máxima de saída em ambos os sentidos. Para ajustar a potência, proceda da seguinte forma :

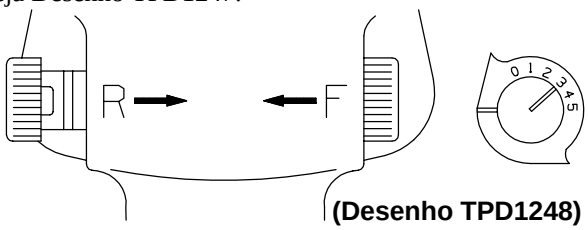
Para máxima potência em ambos os sentidos, gire a válvula de reversão até que a ranhura em cada extremidade da válvula reversa se alinhe com o número 5 em cada lado do corpo.

AVISO

Os números de 0 a 5 no corpo da máquina são apenas uma referência e NÃO indicam uma potência de saída específica. Zero (0) designa a potência mais baixa enquanto cinco (5) designa a mais alta.

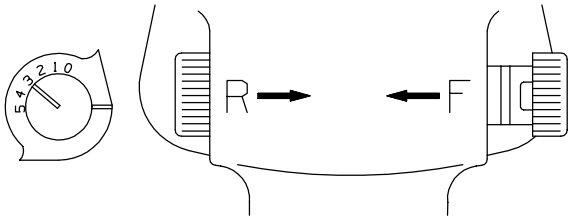
(Desenho TPD1247)

Para uso da potência mínima no sentido frontal e potência máxima no sentido contrário, empurre a válvula de reversão para dentro, à direita da ferramenta, e gire–a até que a ranhura se alinhe com o número desejado no mesmo lado. Isto fornece uma potência mínima para frente, e uma potência máxima para trás quando a válvula de reversão estiver sendo empurrada no sentido contrário. Veja Desenho TPD1247.



(Desenho TPD1248)

Para uso da potência mínima no sentido reverso e potência máxima para frente, empurre a válvula de reversão para dentro, à esquerda da ferramenta, e gire–a até que a ranhura no lado esquerdo fique alinhada com o número desejado no mesmo lado. Isto fornece uma potência máximal para a frente, e uma potência mínima para trás quando a válvula de reversão estiver sendo empurrada no sentido contrário. Veja Desenho TPD1249.



(Desenho TPD1249)

COLOCANDO A FERRAMENTA EM FUNCIONAMENTO

LUBRIFICAÇÃO

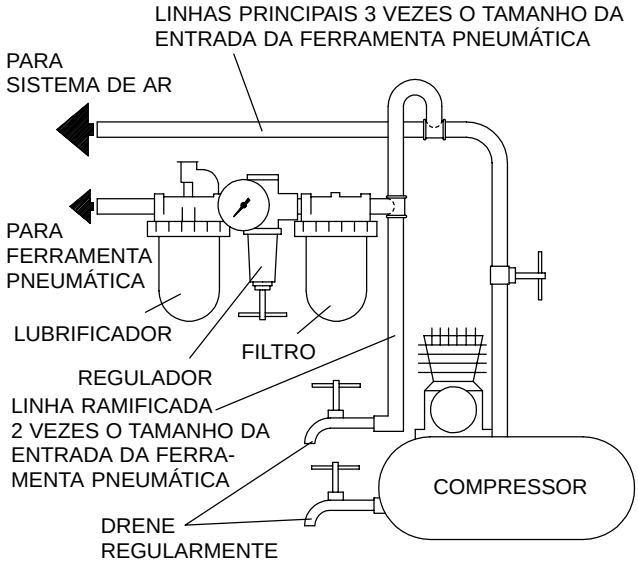
Ingersoll–Rand No. 50 **Ingersoll–Rand No. 100**

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

Para E.U.A. – No. C28–04–FKG0–28

Depois de cada 8 horas de operação, a menos que esteja usando um lubrificador de ar de linha, remova o Bujão da Câmara de Óleo e encha a câmara de óleo com Óleo Ingersoll–Rand No. 50.

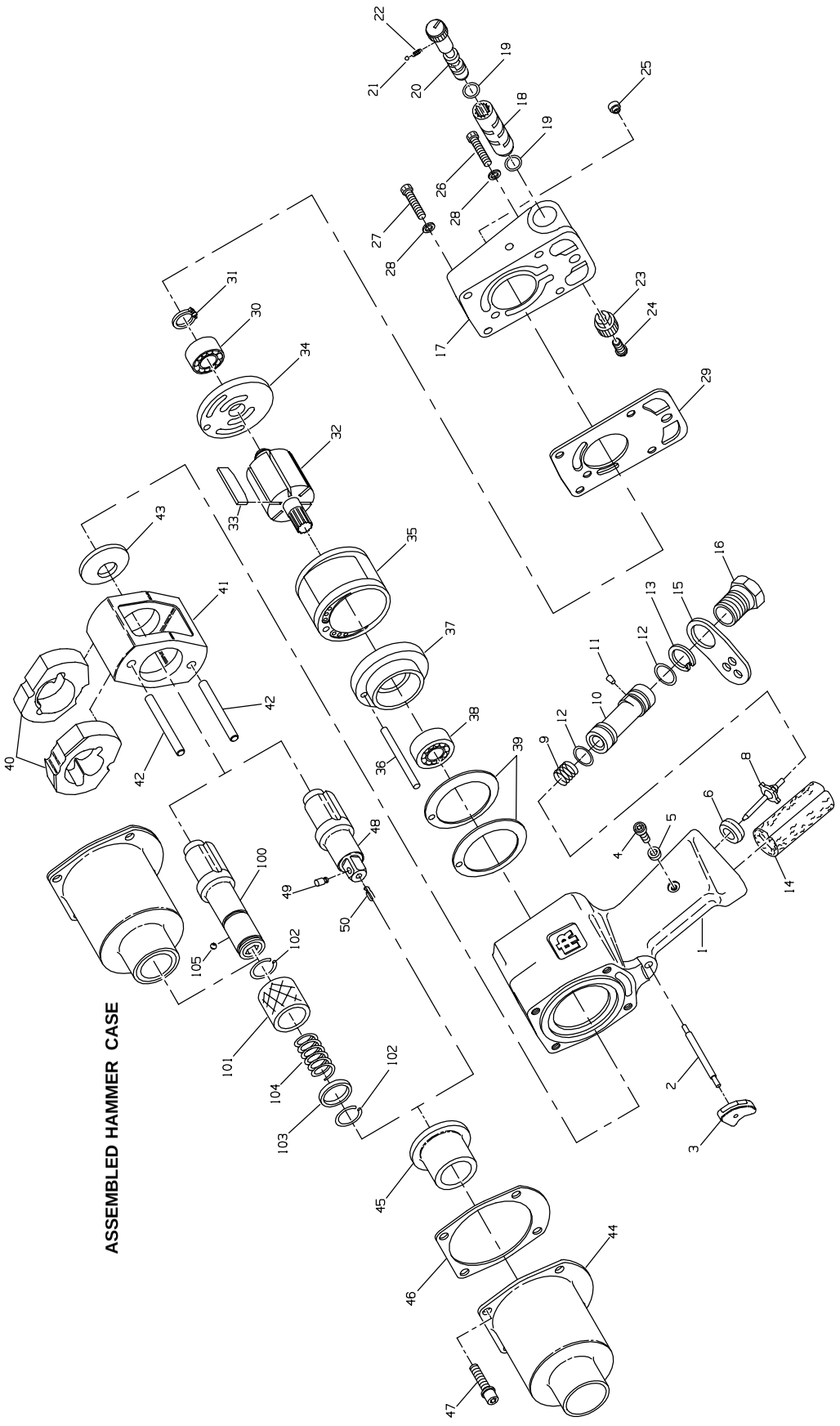
Depois de cada 48 horas de operação, ou conforme a experiência indica, injecte aproximadamente 4 cc de Massa Lubrificante Ingersoll–Rand No. 100 no Adaptador de Massa Lubrificante.



(Desenho TPD905–1)

ESPECIFICAÇÕES

Modelo	Tipo de Punho	Comando pol.	Impactos por minuto	Intervalo de Torque Recomendado
				Nm (pés–lbs)
2906P1	pistola	1/2” quadrada	5.000	54,2–475 (40–350)
2906P7	pistola	1/2” hexagonal de recesso	5.000	54,2–475 (40–350)


ASSEMBLED HAMMER CASE
(Dwg. TPA1112–4)

		PART NUMBER FOR ORDERING	
	1	Motor Housing Assembly	2906P–A40
		Trigger Assembly	7AH–A93
	2	Trigger Pin	7AH–94
	3	Trigger	5RA–93
	4	Oil Chamber Plug	D92–227
♦ •	5	Oil Chamber Plug Seal	R3–92A
♦	6	Throttle Valve Seat	2908–303
♦	8	Throttle Valve	LG2–302
♦	9	Throttle Valve Spring	2908–51
	10	Oiler Body Assembly	2905P–A198
	11	Oiler Plug	77H–75
♦ •	12	Oiler Body Seal (2)	AF120–290
	13	Oiler Retaining Ring	2908–304
♦	14	Exhaust Silencer	2905P–311
	15	Exhaust Deflector	2905P–23
	16	Air Inlet	402–565
		Housing Cover Assembly	2906P–A202
	17	Housing Cover	2906P–202
	18	Reverse Valve Bushing Assembly	231–A330
♦ •	19	Reverse Valve Bushing Seal (2)	PS3–67
	20	Reverse Valve	231–329A
♦	21	Reverse Valve Detent Ball	AV1–255
♦	22	Reverse Valve Detent Spring	231–664
	23	Reverse Valve Knob	231–666
	24	Reverse Valve Knob Screw	231–665
	25	Grease Fitting	130SR–188
+	*	Nameplate	
		for 2906P1 and 2906P7	2906P–301
		for 2906P1–EU and 2906P7–EU	2906P–EU–301

		PART NUMBER FOR ORDERING	
	26	Housing Cover Cap Screw (2) (long)	4U–638
	27	Housing Cover Cap Screw (2) (short)	2906P–638
	28	Housing Cover Lock Washer (4)	4U–58
♦	29	Housing Cover Gasket	2906P–283
♦ •	30	Rear Rotor Bearing	402–22
♦	31	Rear Rotor Bearing Retainer	402–118
	32	Rotor	244–53
♦ •	33	Vane Packet (set of 6 Vanes)	2906P–42–6
•	34	Rear End Plate	231–12
	35	Cylinder	904–3
	36	Cylinder Dowel	2906P–98
•	37	Front End Plate	2906P–11
♦ •	38	Front Rotor Bearing	4U–97
	39	Motor Clamp Washer (2)	804–207
	40	Hammer (2)	231–724
	41	Hammer Frame Assembly	231–A703
	42	Hammer Pin (2)	231–704
	43	Hammer Frame Washer	2906P–706
	44	Hammer Case Assembly	
		for 2906P1 and 2906P7	2906P–A727
		for 2906P1–EU and 2906P7–EU	2906P–EU–A727
	45	Hammer Case Bushing	705–941
	*	Hammer Case Label	
		for 2906P1 and 2906P7	WARNING–2–99
		for 2906P1–EU and 2906P7–EU	EU–99
♦	46	Hammer Case Gasket	2905P–36
	47	Hammer Case Cap Screw (4)	2903P–638

* Not illustrated.

♦ Indicates Tune–up Kit Part.

\+ We recommend that a new Nameplate be ordered with each Housing Cover.

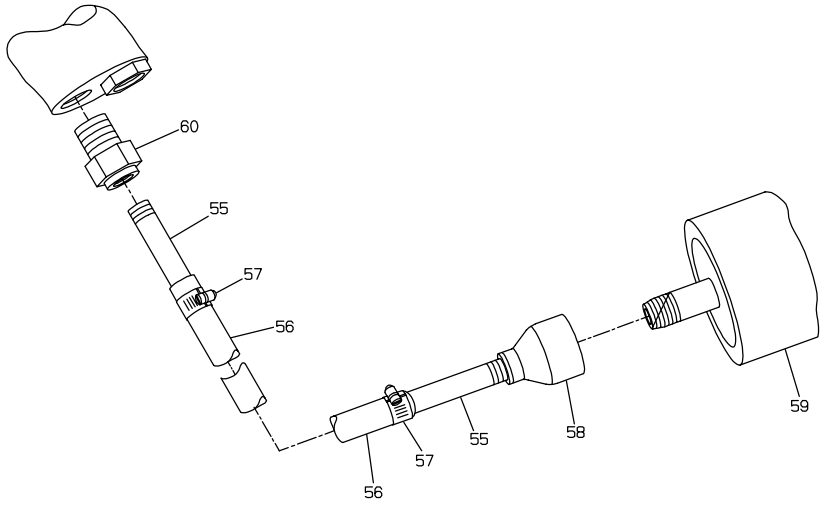
• To keep downtime to a minimum, it is desirable to have on hand certain repair parts. We recommend that you stock one (pair or set) of each part indicated by a bullet (•) for every four tools in service.

			PART NUMBER FOR ORDERING				PART NUMBER FOR ORDERING
	48	Anvil Assembly (with Pin–type Retainer)		102		Thrust Ring Lock (2)	4U–933–7
		1/2” Square Drive	2904–P726	103		Thrust Ring	4U–932–7
		5/8” Square Drive	2904–P826	104		Retaining Sleeve Spring	4U–931–7
♦	49	Socket Retaining Plunger		105		Retaining Ball (7/32” diameter) (2)	2U–722
		for 1/2” Square Drive	804–716	*		Vertical Hanger	2908–365
		for 5/8” Square Drive	808–716	*		Horizontal Hanger	904–366
♦	50	Plunger Spring	5UHD–718	*		Grease Gun	R000A2–228
		Quick–Change Anvil Assembly	705–A926A–7	*		Tune–up Kit (includes illustrated items 5, 6, 8, 9,	
	100	Quick–Change Anvil	705–926A–7			12 [2], 14, 19 [2], 21, 22, 29, 30, 31, 33,	
	101	Retaining Sleeve	4U–930–7			38, 46, 49 and 50)	2906P–TK1

* Not illustrated.

♦ Tune–up Kits

ACCESSORIES AND SPECIAL EQUIPMENT



(Dwg. TPC453)

		PART NUMBER FOR ORDERING
	Piped Away Exhaust Kit	
	with Muffler	2905–KM184
	with Muffler and Coupling	2905–K184
55	Hose Adapter (2)	2905–167
56	Exhaust Hose (10 ft. long)	2905–184
57	Hose Clamp (2)	2905–185
58	Muffler Coupling	2905–186
59	Muffler	2905–674
60	Reducing Bushing	H80–82A

MAINTENANCE SECTION

⚠ WARNING

Always wear eye protection 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 performing any maintenance on this tool.

LUBRICATION

Each time a Series 2906P 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. Coat the Anvil (48 or 100) lightly with grease around the Hammer Case Bushing (45). Inject approximately 1 to 2 cc of grease into the Grease Fitting (25).
2. 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 air hose. Remove the Oil Chamber Plug (4) and fill the oil chamber.

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. Clamp handle of Impactool in a vise with square drive pward.
2. Unscrew and remove the four Hammer Case Cap Screws (47).
3. While lightly tapping on end of Anvil (48 or 100) with a plastic hammer, lift off the Hammer Case Assembly (44).
4. Grasp Hammer Frame (41) and carefully lift off entire impact mechanism, making certain not to drop the two Hammer Pins (42).
5. Lift Hammer Frame Washer (43) off Motor Housing (1) and remove Impactool from vise.

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 it 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. Unscrew Reverse Valve Knob Screw (24) and remove Reverse Valve Knob (23).

NOTICE

This Screw is installed with a thread locking compound.

2. While slowly rotating Reverse Valve (20), withdraw it from Reverse Valve Bushing (18).

NOTICE

Be careful not to lose the Reverse Valve Detent Ball (21) and Spring (22) from the hole in the side of the Reverse Valve.

3. Remove the two Reverse Valve Bushing Seals (19) from Reverse Valve.
4. Press Reverse Valve Bushing from Housing Cover (17).

Disassembly of the Motor

1. Remove the four Housing Cover Cap Screws (26 and 27) and separate the Housing Cover (17) and Housing Cover Gasket (29) from Motor Housing (1).
2. Slide assembled motor out of Motor Housing.

3. If Motor Clamp Washers (39) remained in Housing, remove them. If Washers remained with motor, lift them off Front End Plate (37).
4. Slide Front End Plate, Front Rotor Bearing (38) and Cylinder (35) off Rotor (33) and remove Cylinder Dowel (36) and Vanes (33).
5. Using snap ring pliers, remove Rear Rotor Bearing Retainer (31) and slide Rear End Plate (34) and Rear Rotor Bearing (30) off Rotor shaft.
6. If Front Rotor Bearing or Rear Rotor Bearing must be replaced, use a drift to tap the Bearing out of End Plate.

Disassembly of the Throttle Mechanism

1. Unscrew and remove Oil Chamber Plug (4) and Oil Chamber Plug Seal (5). Drain oil from oil reservoir.
2. Unscrew and remove Air Inlet (16).
3. Lift off Exhaust Deflector (15) and withdraw Exhaust Silencer (l4).
4. Using snap ring pliers, remove Oiler Retaining Ring (13) from inside handle.
5. Withdraw Oiler Body Assembly (10), Throttle Valve Spring (9) and Throttle Valve (8) from handle.
6. Withdraw Trigger Assembly which consists of Trigger Pin (2) and Trigger (3).
7. If Throttle Valve Seat (6) must be replaced, thread a long 3/8" cap screw into it and pull it from handle.

NOTICE

Do not remove the Throttle Valve Seat unless you have a new Seat on hand for installation. Be careful not to lose the Throttle Valve Seat Support (7).

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 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 Throttle Mechanism

1. If Throttle Valve Seat (6) was removed, install and a new Throttle Valve Seat by pushing Seat into place with a 1/2" (13 mm) diameter dowel.
2. Wipe Trigger Pin (3) with some light grease, and insert Trigger Assembly (2) into the trigger bushing.
3. Insert Throttle Valve (8), long stem end first, into bottom of handle so that the valve stem engages hole in Trigger Pin.
4. Install Throttle Valve Spring (9), small end first.
5. Make certain two Oiler Body Seals (12) are positioned in annular grooves on the Oiler (10) and install Oiler, counterbored end first, into handle. The large end of the Throttle Valve Spring should seat in counterbore in Oiler.
6. Install Oiler Retaining Ring (13) in groove in handle.
7. Grasp new (or solution cleaned) Exhaust Silencer (14) by long edge. Fold it lengthwise and while squeezing one end into a round configuration, insert it into the handle flush with exhaust deflector recess.
8. Position Exhaust Deflector (15) on bottom of handle and retain it with Air Inlet (16). Tighten Air Inlet to 30 to 35 ft–lb (40.5 to 47.5 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 (38) into Front End Plate (37) and Rear Rotor Bearing (30) into the Rear End Plate (34).
2. Slip Front End Plate and Bearing over splined hub of Rotor (32).
3. Grasp splined hub of Rotor in leather–covered or copper–covered vise jaws so that Rotor is in a vertical position.
4. Dampen each Vane (33) with light oil and insert a Vane into each vane slot.
5. Set Cylinder (35) over Rotor and onto Front End Plate.
6. Slide Rear End Plate and Bearing onto rotor hub and against Cylinder.
7. Install Rear Rotor Bearing Retainer (31) in groove on rotor hub.
8. Align dowel hole in both End Plates with one through Cylinder, and insert a guide rod 5/32" diameter x 6" long (3.9 mm diameter x 152 mm long). Allow rod to protrude from Front End Plate.
9. Remove assembled motor from vise and grasp handle of Motor Housing (1) in leather–covered or copper–covered vise jaws so that bore of Motor Housing is horizontal.
10. Place two Motor Clamp Washers (39), concave side flat, against Front End Plate. Make certain small holes in Washers fit onto guide rod and outer rim contacts Front End Plate.
11. Insert protruding end of guide rod, Motor Clamp Washers leading, into dowel hole in bore of Motor Housing and slide motor along the rod until it is completely seated.
12. Remove guide rod and replace it with Cylinder Dowel (36).
13. Reposition Motor Housing in vise so that Rear End Plate is upward.
14. Position Housing Cover Gasket (29) and Housing Cover (17) against Motor Housing.

15. Secure Housing Cover with Housing Cover Cap Screws (26 and 27) and Lock Washers (28). Tighten Screws to 50 to 60 in–lb (5.6 to 6.8 Nm) torque.

NOTICE

Install the two short Cap Screws (27) in the holes farthest from the Air Inlet and the two long Cap Screws (26) in the holes nearest the Air Inlet.

16. Remove tool from vise.

Assembly of the Reverse Valve

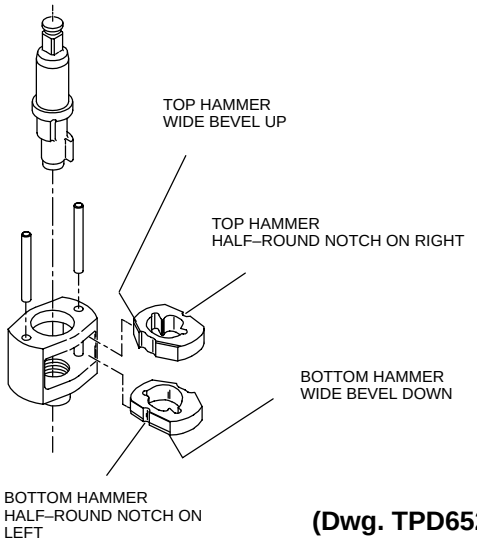
1. If Reverse Valve Bushing (18) was removed, align notch in end of Bushing opposite the internal spline with cast line on Housing Cover (17). The cast line is approximately 180° from the number “5” on Oil Chamber Plug (4) side of Housing Cover. Press the Bushing into Cover until splined end is flush with numbered face of Cover.

NOTICE

When properly installed, the notch and cast line will be on opposite sides of the Housing Cover.

2. Make certain Reverse Valve Bushing Seals (19) are properly located in undercuts in Reverse Valve Bushing.
3. Dampen Reverse Valve (20) with light oil. Install Reverse Valve Detent Spring (22) followed by Reverse Valve Detent Ball (21) in hole in Reverse Valve. With Impactool in an upright horizontal position and while facing handle end of Impactool, slowly rotate Reverse Valve and insert it from left to right in splined end of Reverse Valve Bushing.
4. Apply a thread locking compound to Reverse Valve Knob Screw (24). Attach Reverse Valve Knob (23) to Reverse Valve with Reverse Valve Knob Screw, and tighten Screw to 40 to 50 in–lb (4.5 to 5.6 Nm) torque.

Assembly of the Impact Mechanism



(Dwg. TPD652)

1. Coat Hammers (40) with a light film of Ingersoll–Rand Impactool Grease No. 100.
2. Replace Hammers in Hammer Frame (41) 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 (42).
4. Examine base of Anvil (48 or 100) 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. Position Motor Housing in leather–covered or copper–covered vise jaws with splined shaft of Rotor (32) upward.
2. Place Hammer Frame Washer (43), small hub leading, over hub of Rotor and against the Front Rotor Bearing (38).
3. Place assembled impact mechanism down over splined hub of Rotor.
4. Position Hammer Case Gasket (46) against face of Motor Housing.
5. Smear a thin film of Ingersoll–Rand No. 100 Grease on inside surface of Hammer Case Bushing (45), and place Hammer Case (44) down over Anvil and against Motor Housing.
6. Install Hammer Case Cap Screws (47) and tighten them to 60 to 70 in–lb (6.8 to 7.9 Nm) torque.

TROUBLESHOOTING GUIDE

Trouble	Probable Cause	Solution
Low power	Dirty Inlet Bushing or Air Strainer Screen and/or Exhaust Silencer	Using a 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.