

ETE





# Supplier of Alco Locomotive Spares & GM Locomotive Spares

# ISO 9001:2015



# Contact Us

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# **About IIE**

IIE was established in 1997. In the last 14 years, the firm has supplied items and done project engineering for several companies domestic and abroad. The Company has expertise in Quality Assurance and Inspection of Material and Equipment for Clients around the world. IIE has put together a team of highly experienced supply engineers for Manufacture and Supply of spare parts and Assemblies of ALCO and GM Locomotive. It has project Engineers with expertise in the fields of Locomotive Revival and overhauls of Rolling Stock.

# **Our Vision & Objectives**

IIE is a team of experienced Railway professionals with cummalative expertise of over 100 expert years in Rail transportation and Engineering. The firm has excellent record for Supply and manufacture of ALCO and GM diesel electric locomotive spares with associated services in Rehabilitation.

The IIE team has expertise in the field of Supply of OEM spares of ALCO and GM locomotive including Training, Design & Development, Quality Assurance for Railway and Transport Engineering. IIE's team of Railway professionals have vast experience both in private and Government departments in Vietnam, Australia, USA, Canada, Africa, Myanmar, India in all sector which include Manufacture and Supply of Railway spares.

# **Services**



# Supplier and Manufacturer of OEM spares for ALCO and GM/EMD Diesel electric locomotives

IIE started the export of engineering goods and Railway equipments in 1997. This company was formed by a Group of Senior Railway Engineers who have over 35 years of experience in the Railway sector and other Industrial Groups. They have the experience of over 50 countries, where they have been exporting the Railway equipment from approved services of Indian Railway and also exporting Railway equipments Spare Parts for upkeep and maintenance of Rolling Stock equipments.

# Railway Design and Development

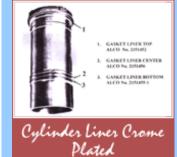
IIE has capabilities in the Design and Development of Railway equipment and it's Component for Railway sector.

# Inspection and Quality Assurance

IIE has high level capability team for Quality Assurance of Railways Spares, Engine Spares and Parts. The in house Team has carried out inspection in USA, China, Malaysia, Japan, Hungary, Brazil, Vietnam, India and other countries.

# **Major Assemblies and Spare Parts for Supply**

- Piston, Connecting Rod and Cylinder Liner
  - $\square$  main piston & connecting rod assy.
  - $\square$  piston pin with sleeve
  - $\square$  compression piston ring (sq. face)
  - $\square$  COMPRESSION PISTON RING (TAPER FACE)
  - $\square$  piston ring
  - $\square$  piston (dished top) five (5) groove
  - $\square$  connecting rod with cap assy.
  - $\square$  Cylinder liner (chrome plated
  - $\square$  Cylinder block
  - $\square$  bearing shell in connecting rod
  - $\square$  bearing shell in connecting rod cop.
  - $\blacksquare$  connecting rod bearing shell set
  - $\square$  cop. connecting rod
  - ☐ PIN SPECIAL
  - $\square$  Steel capped piston five (S) groved etc.



Alco No. - 22110115

# ✤ Cylinder Head with Valve

- $\square$  cylinder head with valves
- $\square$  cylinder head with inserts, less value
- $\square$  AIR AND EXHAUST VALVE SPRING
- ☐ WATER ELBOW KIT (3 PC.) HEAD TO BLOCK (LOCOMOTIVE, MARINE AND STATIONARY)
- oxdot cyliinder head with inconal exh. valve with 45" vsi
- $\blacksquare$  cylinder cover etc.

# Crankshaft, Vibration Damper

- ☐ GEAR, CRANKSHAFT (CAMSHAFT DRIVING)
- $\square$  NUT EXTENSION SHAFT
- $\square$  Key, SPL" EXTENSION SHAFT TO COUPLING
- ☐ DAMBER, VIBRATION (PADDLEWHEEL)
- SPACER, CRANKSHAFT EXTENSION (PUMP OR TACH, DRIVE) 3 CENTER HOLES TAPPED
- $\square$  VERTICAL SHAFT ETC.





# Connection Cylinder Head to Block Air Elbow

- **L** ELBOW, AIR, HEAD TO BLOCK (DUAL FUEL ONLY)
- $\square$  ELBOW, AIR, HEAD TO BLOCK
- $\square$  gasket, elbow to block
- ☐ LOCATING PLATE, ELBOW TO CYI. HEAD
- $\square$  CAPSCREW, ELBOW TO BLOCK
- $\square$  capscrew, elbow to cyl. Head
- ☐ TUBE, CYLINDER HEAD DRAINS FP SUPPORT
- ☐ GROMMETT, INJECTOR AND DRAIN TUBE FP SUPPORT COVER ETC.

#### Fuel Pump Support, Cross Head, Lifters and Covers

- $\square$  FUEL PUMP SUPPORT, CROSSHEAD AND LIFTER UNIT
- ☐ STUD, FOR COVER, SPL. CROSSHEAD, UNIT
- ☐ CROSSHEAD, FUELPUMP
- ☐ RETAINER, SPRING, LOWER AUXILIARY
- $\square$  Spring, Auxiliary, fuel pump crosshead
- $\square$  capscrew, locking plate to fuel pum support etc.

#### Lubricating Oil Pump and Drive

- **I** PUMP, LUBRICATING OIL
- LUBRICATING OIL PUMP WITH INTEGRAL VALVE, 130-135 IB.
- $\square$  LUBRICATING OIL PUMP WITH INTEGRAL VALVE, 90-95 IB.
- □ LUBRICATING OIL PUMP FOR INTEGRAL VALVE (LESS VALVE)
- 🗍 GASKET, PLATE TO PUMP AND BASE, (251-A, BAND C ENGINE)
- $\square$  LUBE OIL DEPTH GAUGE ASSY.
- ☐ DEPTH GAUGE LUBRICATING
- $\square$  plug drain, lubricating oil
- $\square$  header, lubricating oil to main bearing
- ☐ SUPPORT, LUBE OIL HEADER ETC.

#### Governor Drive and Linkage

- $\square$  coupling, drive to governor shaft
- $\square$  bearing, ball, gov. drive shaft
- $\square$  LINK, GOVERNOR LEVER TO SPRING LEVER
- $\blacksquare$  arm, f.p. control shaft to governor linkage
- $\square$  shim, inner and outer retainer to housing
- $\square$  shim, bracket to brg. Housing gasket
- ☐ SPACER, LOWER, GOVERNOR DRIVE SHAFT
- $\square$  link, governor lever to spring lever etc.

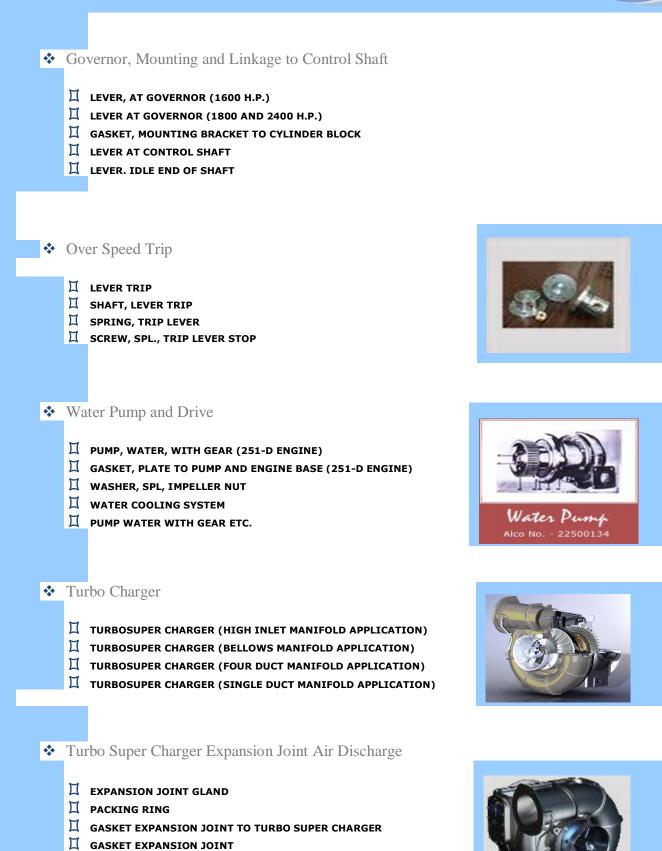




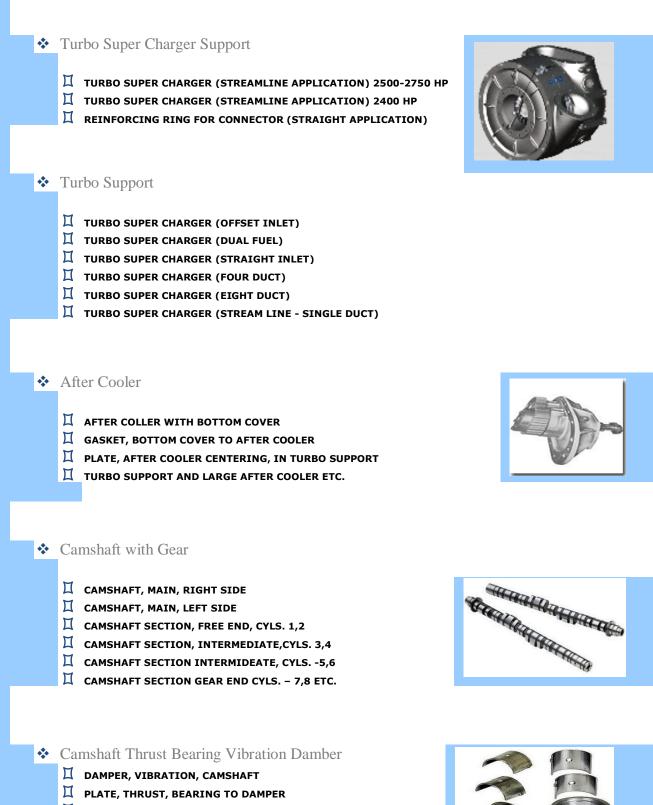








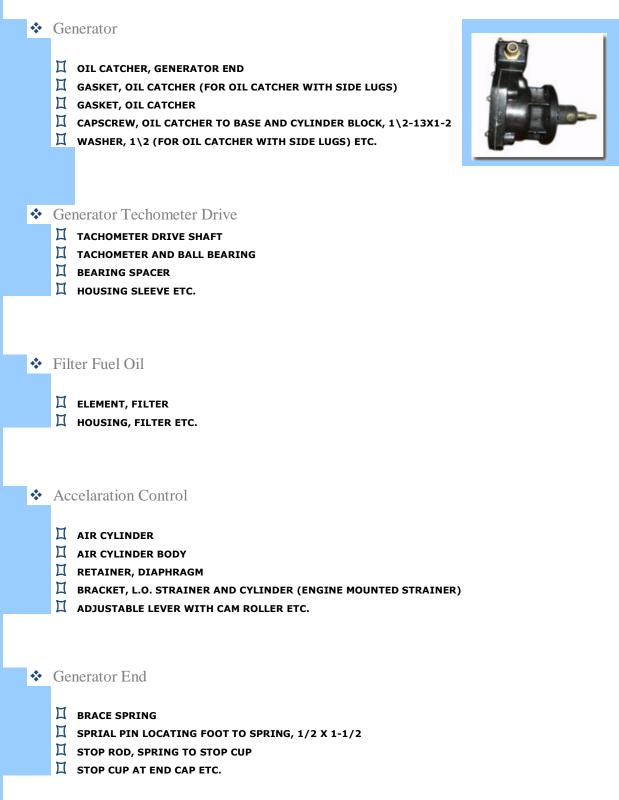
- ☐ BELLOW CONNECTORS
- **I** FLOATING BUSHING
- $\blacksquare$  bearing, ball pinion and drive gear shaft etc.



 $\square$  cover, vibration dampoer etc.







#### Generator Connection

- $\blacksquare$  capscrew, spl. crane shaft flange to generator
- $oxedsymbol{I}$  capscrew, Spl. genertor and mounting block to Cyl. block
- $\square$  capscrew, Spl. generator and mounting block to base
- $\square$  shim, mounting block to cylinder block
- $\square$  duct, air, generator fan, left side etc.

# Fuel Injection Nozzle and Holder

- $\square$  NOZZLE HOLDER
- $\square$  "0" ring, nozzle holder retaining nut
- $\square$  Spindle, nozzle holder
- $\square$  'O' RING, INJECTOR
- $\square$  NOZZLE FOR 251-B, 16 CYLINDER ENGINE
- $\square$  NOZZLE FOR 251-B, 6 CYLINDER ENGINE
- $\square$  nozzle and holder, fuel injector
- ☐ PUM, FUEL INJECTOR
- $\square$  TUBE, FUEL INJECTION ASSEMBLY
- ☐ PIPING, FUEL OIL
- $\square$  valve, snubber pump to injection tube
- $\square$  nozzle opening sleeve etc.

#### Fuel Pump Control Shaft, Linkage and Levers

- $\square$  shaft, control, with coupling, dogs and lever
- $\blacksquare$  shaft, control, with coupling, dogs and lever, left side
- $\square$  coupling, control shaft sections
- ☐ LEVER, CONTROL LINKAGE, R.S. SHAFTS
- LEVER, CONTROL LINKAGE, L.S. SHAFTS
- $\square$  arm control shaft to governor linkage etc.

# Fuel and Lubricating Oil Strainer

- $\square$  header lubricating oil to valve gear
- $\blacksquare$  gasket, filler to base
- COVER, HOUSING
- 🔲 "T BOLT
- $\square$  gasket, element to cover and tube etc.



Fuel Booster Pump Alco No. - 2491283



- ADAPTOR, FEMALE AT LOWER HOSE, 7/8-14X1/2 IPS
- $\square$  TUBE, HOSE TO RELIEF VALVE MANIFOLD, 5/8 OD X 0.049 W X 78 IN ETC.

# Cylinder Block with Studs and Main Bearing Caps

- I STUD SPL. CYLINDER HEAD
- $\square$  pipe plug, center bearing CAP, 1/2 in IPS hex socket
- $\square$  connector tube to main bearing, 7/8 in 0.0. 3/4 in IPS
- $\square$  stud bolt, intermediate bearing etc.

# Cylinder Block

- $\square$  NUT, SPL. FOR STUD UNDER VALVE LEVER CASING
- $\square$  SLEEVE, LINER TO BLOCK, LOWER (STANDARD)
- $\square$  EXPANSION PLUG, IN NUT, VALVE LEVER CASING
- $\square$  EXHAUSTER CRANKCASE

### ✤ Locomotive and Cab. Items

- $\square$  hood engine compartment
- $\blacksquare$  windows sliding
- ☐ LINER FELT
- $\square$  wick assembly with plate
- $\square$  RUBBER SPIDER
- ☐ SPRING SEAT (FRONT)
- $\square$  glass window
- $\square$  sliding window
- ☐ WEATHER STRIP ½" HALF ROUND 7"-10"
- $\square$  wiper blade window 8"
- $\square$  wiper blade window 12"
- ☐ ARM REST
- $\blacksquare$  ARM REST ASSY. WITH HINGE
- $\square$  sliding window central latch
- 🔲 LATCH
- $\square$  cover plate
- $\square$  LOCK DOOR
- $\square$  weather strip top
- $\square$  SNUBBER FRICTION
- $\square$  BLADE ASSEMBLY
- $\square$  connection (elbow bent)
- ☐ LOCK WIRE SPECIAL 0.080" DIA 6"
- $\square$  GRILL FRONT GLASS
- ☐ WEATHER STRIP 6.5 MR
- ☐ FILTER STRIP 6.5 MR





# **GM Loco Parts**

- 🔲 BREAKER, 15A
- 🔲 BREAKER, 30A
- 🔲 BOLT
- $\square$  BOLT (BEARING SETING)
- □ BOLT-HEX HEAD 3/8-24X11-5/8-OIL LINE MOUNTING
- ☐ BOLT-HEX HEAD ¾-16X2-5/8- BRACKET TO OIL PAN
- ☐ CRAB-STRAINER
- $\square$  BOLT SPECIAL BRILLED HEAX HEAD <sup>3</sup>/<sub>4</sub>-16X4-IDLER GEAR
- ☐ WASHER-FLAT -NO.10
- □ SCREW-TAPPING-5/16-18X3/4 HEX WASHER HEAD
- ☐ BOLT SPECIAL HEX HEAD 5/16-18X7/8-WITH NYLON INSERT
- ☐ BOLT ASSEMBLY-SWIVEL
- □ NUT, SPLINE-3/8-0=24-CYLINDER HEAD BRACKET BOLT
- ☐ SCREW, 8-32X7/8
- **I** SCREW MACHINE,1/4-20X1/2
- □ NUT-CAP TO ROD BOLT-5/8-18 HEX SLOTTED-FORMERLY 122797
- ☐ WASHER-LOCK NO. 8-INTERNAL TEETH
- WASHER-LOCK 5/16
- $\square$  washer-lock no. 10
- ☐ WASHER-LOCK 1/4
- ☐ WASHER-LOCK 1/2
- ☐ WASHER-FLAT 1/4
- ☐ WASHER-FLAT 1/2
- WASHER-FLAT 3/8
- $\square$  washer-lock-bearing
- ☐ SCREW-FILLISTER HEAD 8-32X1/4-LEAD TERMINAL
- ☐ SCREW-FILLISTER HEAD ¼-20X1-1/2-BEARING COVER
- $\square$  gasket-oil line to camshaft block
- ☐ WASHER LOCK 1'
- ☐ WASHER-PLAIN 5/16
- $\square$  washer indicator
- WASHER-HARDENED 1/2
- ☐ SCREW 10-32X1/2 CROSS RECESS
- ☐ SCREW, TAPPING, 10-32X5/8 RD, HD
- ☐ PIN STRAIGHT 1/8X1 INCH LONG
- ☐ BOLT SILENCER TO TURBOCHARGER 1/2-20X2-15/16-SPECIAL
- ☐ BOLT-DRILLED HEX HEAD 1/2-20X1-1/4-STUBSHAFT MOUNTING
- ☐ BOLT-DRILLED HEX HEAD 1/2-13X1-1/4 TURBOCHARGER DRIVE GEAR MOUNTING
- ☐ SEAL-`O' RING
- $\square$  STRAINER ASSEMBLY-SCAVENGINE OIL
- $\square$  NUT, INJECTOR
- ☐ CIRCUIT BREAKER CONTROL 50 A.M.P
- ☐ CIRCUIT BREAKER 100 A.M.P
- $\square \qquad \mathsf{NUT} \text{ INJECTOR VALVE ETC.}$





# Mr. Ravi Kumar Kaul – Managing Director

Over 60 years' Experience of Railways and Railway Equipment with Educational Qualification of Bachelor of Mechanical Engineering from Indian University, did Masters of Railway Engineering from Cranefield Institute of Technology (United Kingdom) in 1973-74.

Rose to the Position of Chief Mechanical Engineer in India Railways and was Incharge of DMW (Diesel Motive Power Works) in Indian Railway. Ravi Kumar Kaul was Chief Mechanical Engineer Advisor in Sri Lanka Railways for Four years 1983-87. Ravi Kumar Kaul was Director (Technical) RITES Ltd. And was Instrumental in Exporting Diesel Locomotive from India to Bangladesh and Sri Lanka, Myanmar, Namibia, Tanzania and Malaysia. Mr. Ravi Kumar Kaul was Advisor and Consultant with the World Bank and UNDP.

# Mrs. Krishna Kaul- Director

Over 50 years as Ex Presence in Lecturer and as Professor in Delhi University was Awarded Ph.D Degree from Delhi University and has the Distinction of Post Doctorate Award of D.UTT has Vas Experience in Administration.

# Mr. Shriniwas – Executive Director, Sourcing, Quality Assurance, Procurement, International

# Infrastructure Engineers, Delhi, India

Having spent almost 49 years with the Indian Railways and RITES Ltd., Mr. Shriniwas has varied experience in various technical and engineering including the supplies of Rolling Stock and Locomotive equipment as export to over 30 Countries. Widely traveled, he has been posted for seven years in the Railway Advisers Office in London, undertook assignment with Henschel and MTU of Germany for equipment ordering, supplies and Quality Assurance. He has visited various countries in Asia and Africa and done assignments in these countries. His special expertise includes:

- Sourcing and Identification of Rolling Stock items
- Supplies of Diesel Locomotives Spares
- Quality Assurance of Diesel Locomotive Spares and Assemblies
- Design, manufacture and maintenance of diesel locomotives
- Contract management and business development of Rolling Stock including Diesel Locomotives

#### Mr. Y.K. Malhotra -

Mr. Malhotra is a Mechanical Engineer has over 45 Year experience in Northern Railway RDSO and other organizations, having expertise in Diesel Locomotives and Rolling Stock; Manufacture; Maintenance / Inspection of Locomotives Coaches, Wagons. His key assignments include improvements in Diesel Locomotives Maintenance Particularly Brake systems and detailed Studies for introduction of this Brake System on the Railway System. As Chief Quality Control Engineer, he was responsible for Monitoring the Quality of manufacture of 45 ft long container flat wagons suitable for 9<sup>1/2</sup>ft height for Container Corporation of India.



Presently working with IIE, Delhi, India as Railway Consultant - Manager Export & International Operation and responsible for:

- Source of Supply from approved Manufacturer as by Indian Railways
- Procurement of Spare Parts for the Diesel Electric Locomotive for Broad Gauge and Meter Gauge and Locomotives
- Marketing of the Organization in various countries for supplies and ordering
- Exports of the Diesel Electric Locomotive items.

# Mr. Dhanpat Rai – Manager Export / Procurement- Intenational Infrastructure Engineers, Delhi, India

Mr. Rai is a Mechanical Engineer who spent more than 45 years with the Indian Railways. His last assignment with the Indian Railways was in Research, Design and Standards Organisation. His key expertise includes:

- Design, manufacture and maintenance of diesel locomotives, Coaches, Wagons.
- Import substitution
- Quality Control
- Material management
- Standardization of designs

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# Mr. K.K. Dutt

Mr. Dutt has over 40 years of Railway Experience in the field of maintenance of Electric Locomotives, Electric Traction Assemblies, Repair and overhaul of Electric Traction spare parts etc. He is well versed in the field of sourcing of supplies for all Electric Traction Assemblies, Spare parts including inspection and quality Assurance of all Assemblies.

# <u> Mr. Ashish Parcha – Marketing / Sales - Manager</u>

He is the Marketing and Sales Manager of Railway Equipment Division and has over 15 year washing service in Railway Equipment.

# Mr. Chandrashekhar Jha – Accounts Manager

He is the Accounts Manager and Deals with all the issues of Finance, Accounting Taxation and Capital organization.



# Mr. Teja Singh – Manager Incharge of stores and warehouse

He is Manager Incharge of stores and warehouse. He has the experience of over 20 years in the Management of stores and stores management including all the receipt Of Dispatch.

# <u> Mr. Somnath – Incharge of Inhouse stores</u>

He is Incharge of inhouse stores including the Packing and Transport of the stores to the clients.

# Mr. Om Prakash Raut

Support the keeping up the stores and inventory and is well acquainted with all the items of Railways components.

# Mr. Mohan Lal

Help the Manager Incharge of stores and warehouse. Has the Experience of over 20 years in Managing store keeping.